AD-A057 310 PRATT AND WHITNEY AIRCRAFT GROUP EAST HARTFORD CONN F/G 20/1
INTERNAL MIXER INVESTIGATION FOR JT8D ENGINE JET NOISE REDUCTIO--ETC(U)
DEC 77 A B PACKMAN, D C EILER DOT-FA76WA-3809
UNCLASSIFIED PWA-5582-VOL-2 FAA-RD-77-132-2 NL

1 OF 2
AD
A057310

eport No. FAA RD-77-132,II

LEVEL III

A057310

AD A057310

INTERNAL MIXER INVESTIGATION FOR JT8D ENGINE JET NOISE REDUCTION

Volume II–Appendicies A, B, C,and D

A.B. Packman and D.C. Eiler

AD No.
DDC FILE COPY

December 1977

FINAL REPORT

Document is available to the U.S. public through the National Technical Information Service, Springfield, Virginia 22161.

Prepared for

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
Systems Research & Development Service
Washington, D.C. 20590

NOTICE

1. Report No. 18 19	2. Government Accession No.	3. Recipient's Catalog No.
FAA-RD-77-132-2		

4. Title and Subtitle	5. Report Date 11 12
6 INTERNAL MIXER INVESTIGATION FOR JT8D ENGINE JET NOISE REDUCTION, Volume II • Appendices A,B,C, and D	December 1977 185p.
	6. Performing Organization Code
7. Author(s) 10	8. Performing Organization Report No. 14
A. B. Packman and D. C. Eiler	PWA-5582- VOL-2
9. Performing Organization Name and Address	10. Work Unit No. (TRAIS)
UNITED TECHNOLOGIES CORPORATION Pratt & Whitney Aircraft Group ✓ 400 Main Street (MSEB-2B) East Hartford, Connecticut 06108	11. Contract or Grant No. 15 DOT-FA76WA-3809
	13. Type of Report and Period Covered 9
12. Sponsoring Agency Name and Address U. S. Department of Transportation Federal Aviation Administration Systems Research & Development Service Washington, D. C. 20590	Final Report • May 1976 through July 1977
	14. Sponsoring Agency Code

15. Supplementary Notes

16. Abstract

A scale model experimental program was conducted to determine the noise reduction and the impact on propulsive performance that would result from installing a multi-lobed internal mixer on the JT8D engine. Long and short mixer designs were investigated. One-seventh scale mixer models, designed to permit lobe geometry variations, were fabricated and tested along with a model of the JT8D reference exhaust system.

The test results indicated that, in general, the long and short mixers produced 3-4 PNdB reduction in Peak Perceived Noise Level relative to the reference exhaust system. Exhaust system performance, in terms of improvement in cruise thrust specific fuel consumption (TSFC), and impact on takeoff thrust, was somewhat better for the long mixer than for the short mixer configurations. However, the short mixers offer significant advantages in terms of weight savings and minimized the hardware changes required for installation in the current JT8D engines. Based on the noise and performance test results in conjunction with the installation considerations, a short mixer design was recommended for evaluation in a full scale engine test.

17. Key Words	18. Distribution Statement
Acoustics Jet Noise Internal Exhaust Mixers Aircraft Noise Reduction	Document is available to the U.S. public through the National Technical Information Service, Springfield, Virginia 22161.

19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages	22. Price
UNCLASSIFIED.	UNCLASSIFIED	188	

Form DOT F 1700.7 (8-72) Reproduction of completed page authorized

287590

METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
in	inches	*2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
		AREA		
in^2	square inches	6.5	square centimeters	cm^2
ft^2	square feet	0.09	square meters	m^2
yd^2	square yards	0.8	square meters	m^2
mi^2	square miles	2.6	square kilometers	km^2
	acres	0.4	hectares	ha
		MASS (weight)		
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
		VOLUME		
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft^3	cubic feet	0.03	cubic meters	m^3
yd^3	cubic yards	0.76	cubic meters	m^3
		TEMPERATURE (exact)		
°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

*1 in ≡ 2.54 (exactly). For other exact conversions and more detailed tables, see NBS Misc. Publ. 286, Units of Weights and Measures, Price $2.25, SD Catalog No. C13.10:286.

Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
mm	millimeters	0.04	inches	in
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
m	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi
		AREA		
cm^2	square centimeters	0.16	square inches	in^2
m^2	square meters	1.2	square yards	yd^2
km^2	square kilometers	0.4	square miles	mi^2
ha	hectares (10,000 m^2)	2.5	acres	
		MASS (weight)		
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	
		VOLUME		
ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m^3	cubic meters	35	cubic feet	ft^3
m^3	cubic meters	1.3	cubic yards	yd^3
		TEMPERATURE (exact)		
°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F

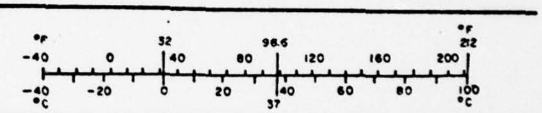


TABLE OF CONTENTS;

APPENDIX A

TEST CONDITIONS FOR ACOUSTIC AND EXIT PROFILE TESTS

The operating condition for each test point of the configurations tested under the contract are included in this Appendix. The data are listed in the following order:

Configuration Name	Configuration Number
Basic Long Flowpath Mixer	1A
Reference Exhaust System	2Au
Reference Exhaust System (tested at ideallv mixed conditions)	2Am
Shallow Scalloped Long Flowpath Mixer	3A
Scalloped Long Flowpath Mixer	4A
Cutback Scalloped Long Flowpath Mixer	5A
Cutback Unscalloped Long Flowpath Mixer	6A
Scalloped Long Flowpath Mixer with Engine Flow Simulation	7A
Cutback Scalloped Long Flowpath Mixer with 7.6 inch Engine Extension	8A
Severe Cutback Short Flowpath Mixer with Engine Flow Simulation	10A
Severe Cutback Short Flowpath Mixer	11A

NOTE: Unless noted otherwise, the long flowpath mixers were tested with a 16 inch engine extension, and the short flowpath mixer was tested without an engine extension.

The following nomenclature is used:

BPR	-	Bypass ratio, fan flowrate divided by primary flowrate
C_a	-	Speed of sound in the test chamber, ft/sec.
F_n	-	Full scale JT8D engine thrust on an FAA day, lbs
P_a	-	Static pressure in the test chamber,
P_t/P_a	-	Nozzle pressure ratio, nozzle total pressure divided by test chamber ambient pressure
RH_a	-	Relative humidity in the test chamber
T_a	-	Temperature in the test chamber, °F
T_t	-	Nozzle total temperature, °R
V	-	Jet velocity; ideally expanded to test chamber pressure, ft/sec.
V/C_a	-	Ratio of jet velocity to test chamber speed of sound
W	-	Flowrate, lbm/sec
Primary	-	Primary or inner exhaust stream
Fan	-	Fan or outer exhaust stream
Ideal Mix	-	The mass flow average value, e.g., $V_{mix} = \dfrac{W_{pri} V_{pri} + W_{fan} V_{fan}}{W_{pri} + W_{fan}}$

The full scale JT8D engine thrust, F_n, was determined as follows:

A. Reference System: The V_{pri}/C_a of each test point was related to the FAA day JT8D engine thrust by the curve of V_{pri}/C_a vs. F_n, Figure A1, developed from full scale engine test data*. Since for low bypass exhausts the jet noise is essentially independent of small variations in the secondary flow conditions, this procedure allows the model data to be scaled using primary velocity to predict the full size engine noise.

B. Mixer Nozzles: The V_{mix}/C_a of each test point was related to the FAA day JT8D engine thrust by the V_{mix}/C_a vs. F_n curve of Figure A-1, which was determined by calculating the V_{mix}/C_a for the engine operating line conditions by the formula defined in the nomenclature listed above*. For exhausts with internal mixer nozzles, the jet noise is a function of the calculated mixed velocity. This procedure allows small variations in bypass ratio and the resultant effect on mixed velocity to be accounted for correctly, thus, allowing the mixer nozzle data to be scaled properly to predict the effect of a mixer on JT8D engine noise.

The above procedure for relating JT8D engine noise with thrust is based on observations that jet noise is a direct function of the characteristic jet velocity divided by the ambient (test chamber) speed of sound, as shown in ref. 2. Since the model nozzles were tested at pressure, temperature, and density conditions simulating the JT8D engine, density effects on noise could be neglected.

*For these calculations, it was assumed that the installation of a mixer on the JT8D engine would not change the engine thrust-airflow relationship established for the baseline configuration.

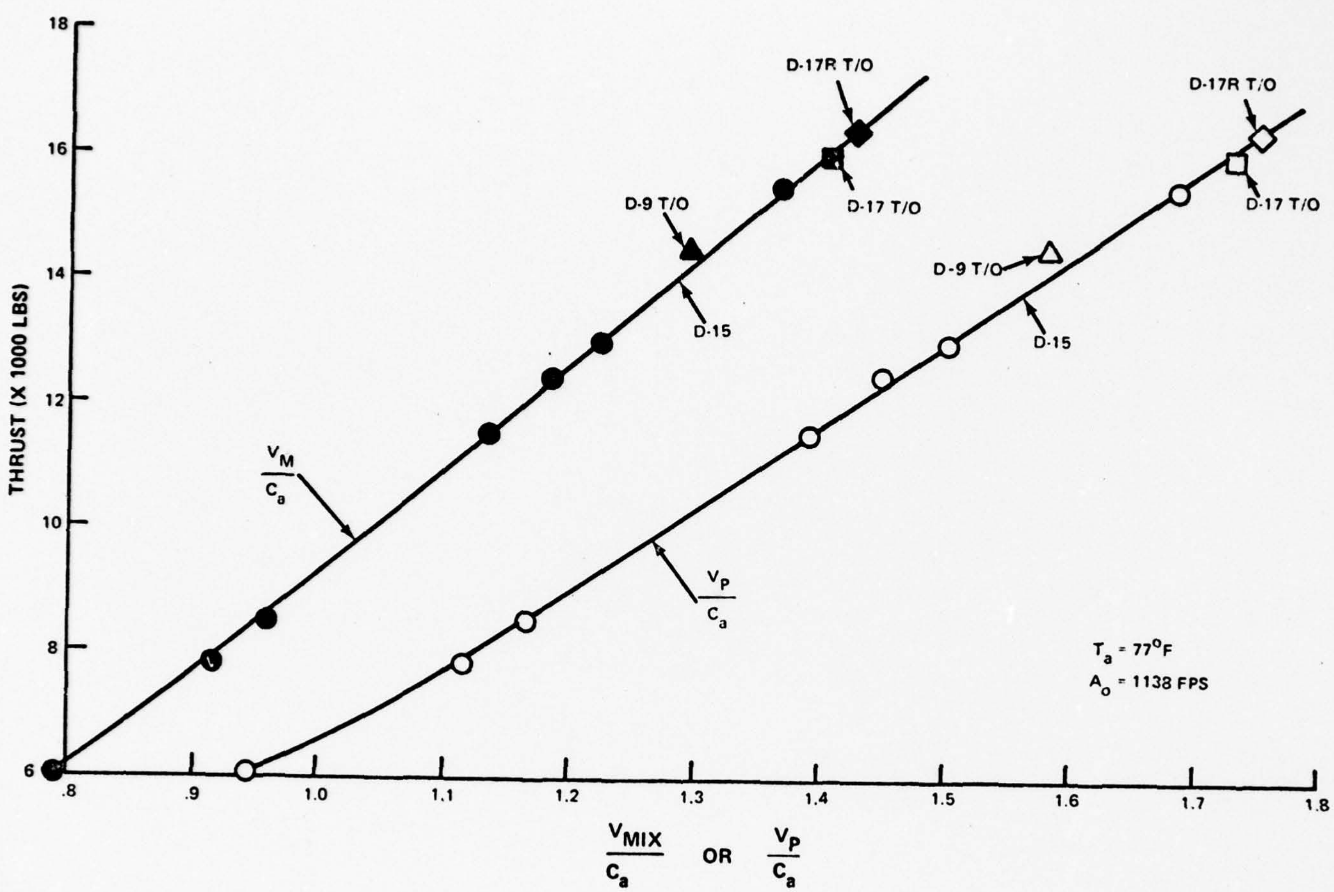


Figure A.1 Thrust vs V/C_a for Reference and Mixed JT8D-15

TABLE 1A

BASIC LONG FLOWPATH MIXER; WITHOUT ENGINE SECONDARY FLOW SIMULATION; CONFIGURATION 1A

Condition Number	Primary P_T/P_a	Primary T_T (°R)	Primary V (FPS)	Primary W (lb/sec)	Fan P_T/P_a	Fan T_T (°R)	Fan V (FPS)	Fan W (lb/sec)	BPR	Ideal Mix $T_{T\,mix}$ (°R)	Ideal Mix V_{mix} (FPS)	V_{mix}/C_a	Test Chamber T_a (°F)	Test Chamber P_a (PSI)	Test Chamber RH_a	F_n (lb)
5310	2.153	1616.7	1969.	3.109	2.009	710.6	1243.0	3.423	1.101	1,141.9	1,588.5	1.43	52	14.8	30	16500
5309	2.135	1606.7	1947.	3.081	1.995	700.8	1228.0	3.425	1.112	1,129.1	1,567.9	1.41	52	14.8	30	16150
5308*	2.080	1569.7	1808.	3.005	1.963	690.0	1206.0	3.433	1.143	1,100.5	1,528.9	1.38	52	14.8	31	15650
5306	1.858	1462.2	1694.	2.715	1.789	676.5	1119.0	3.225	1.188	1,035.6	1,381.8	1.24	53	14.8	29	13250
5305*	1.798	1434.3	1635.	2.622	1.741	667.4	1087.0	3.153	1.203	1,015.3	1,338.8	1.20	53	14.8	28	12600
5304	1.696	1410.4	1546.	2.345	1.740	653.8	1069.0	3.390	1.445	963.2	1,264.1	1.14	51	14.8	28	11550
5303	1.527	1316.8	1347.	2.203	1.483	625.9	897.0	2.646	1.201	939.8	1,101.5	1.99	52	14.8	27	9000
5302	1.504	1249.9	1288.	2.218	1.446	622.6	863.0	2.557	1.153	914.0	1,060.4	.96	53	14.8	26	8500
5301	1.390	1239.3	1158.	1.905	1.368	616.0	798.0	2.402	1.261	891.7	957.2	.86	51	14.8	26	6900

TABLE $2A_u$

REFERENCE EXHAUST SYSTEM WITHOUT ENGINE SECONDARY FLOW SIMULATION; CONFIGURATION $2A_u$

Condition Number	Primary P_T/P_a	Primary T_T (°R)	Primary V (FPS)	Primary W (lb/sec)	Fan P_T/P_a	Fan T_T (°R)	Fan V (FPS)	Fan W (lb/sec)	BPR	Ideal Mix $T_{T\,mix}$ (°R)	Ideal Mix Vmix (FPS)	$V_{pri.}/C_a$	Test Chamber T_a (°F)	Test Chamber P_a (PSI)	Test Chamber RH_a	F_n (lb)
5510	2.150	1607.7	1958	3.530	2.012	700.4	1234	3.042	.862	1187.7	1623	1.76	53	14.7	61	16500
5509	2.113	1600.2	1935	3.472	1.985	697.7	1221	3.036	.874	1179.3	1602	1.74	53	14.7	60	16250
5508*	2.057	1573.7	1886	3.339	1.915	687.8	1184	3.086	.924	1148.2	1549	1.70	54	14.7	60	15700
5507	1.993	1524.2	1819	3.290	1.806	681.1	1169	3.027	.920	1120.2	1508	1.64	53	14.7	59	14900
5506	1.862	1464.2	1700	3.058	1.790	673.9	1115	2.922	.956	1077.9	1414	1.53	53	14.7	59	13400
5505*	1.807	1435.8	1644	2.934	1.755	664.5	1089	2.960	1.009	1048.4	1365	1.48	53	14.7	58	12700
5504	1.743	1405.2	1580	2.829	1.694	647.1	1043	2.864	1.012	1023.9	1310	1.42	55	14.7	55	11900
5503	1.486	1314.6	1301	2.157	1.516	628.7	919	2.768	1.283	929.1	1086	1.17	53	14.7	62	8550
5502	1.434	1314.0	1240	2.041	1.464	617.1	872	2.653	1.300	920.1	1032	1.12	50	14.7	68	7850
5501	1.313	1265.4	1068	1.709	1.350	599.2	768	2.393	1.400	876.8	893	.96	50	14.7	68	6200

TABLE $2A_m$

REFERENCE EXHAUST SYSTEM (TESTED AT IDEALLY MIXED CONDITIONS); WITHOUT ENGINE SECONDARY FLOW SIMULATION; CONFIGURATION 2Am

Condition Number	Primary P_T/P_a	Primary T_T (°R)	Primary V (FPS)	Primary W (lb/sec)	Fan P_T/P_a	Fan T_T (°R)	Fan V (FPS)	Fan W (lb/sec)	BPR	Ideal Mix $T_{T\,mix}$ (°R)	Ideal Mix V_{mix} (FPS)	V_{mix}/C_a	Test Chamber T_a (°F)	Test Chamber P_a (PSI)	Test Chamber RH_a	F_n (lb)
7409	2.060	1156.9	1608.7	3.423	2.077	1166.8	1624.1	2.921	0.853	1161.5	1615.8	1.45	60	14.3	36	16800
7408*	2.020	1154.8	1587.0	3.370	2.036	1154.2	1595.0	2.877	0.854	1154.5	1590.7	1.42	60	14.3	35	16300
7407	1.982	1126.9	1547.6	3.367	1.983	1131.4	1551.8	2.802	0.832	1128.9	1549.5	1.39	60	14.4	34	15800
7406	1.858	1091.0	1463.2	3.156	1.881	1090.8	1476.4	2.752	0.874	1090.9	1469.4	1.32	52	14.4	70	14600
7405*	1.792	1038.7	1388.6	3.138	1.796	1035.4	1388.9	2.640	0.841	1037.2	1388.7	1.27	41	14.4	71	13800
7404	1.742	1020.0	1345.7	3.029	1.763	1016.4	1356.5	2.658	0.878	1018.3	1350.7	1.23	41	14.4	70	13100
7403	1.667	982.1	1269.4	2.915	1.689	993.9	1291.8	2.547	0.874	987.6	1279.8	1.17	41	14.4	69	12100
7402	1.487	925.8	1095.2	2.567	1494	917.6	1096.6	2.220	0.886	922.0	1095.8	1.00	41	14.4	67	9200
7401	1.436	900.2	1034.4	2.447	1.446	901.2	1044.2	2.148	0.878	900.7	1039.0	.95	42	14.4	63	8300

TABLE 3A

SHALLOW SCALLOPED LONG FLOWPATH MIXER; WITHOUT ENGINE SECONDARY FLOW SIMULATION; CONFIGURATION 3A

Condition Number	Primary P_T/P_a	Primary T_T (°R)	Primary V (FPS)	Primary W (lb/sec)	Fan P_T/P_a	Fan T_T (°R)	Fan V (FPS)	Fan W (lb/sec)	BPR	Ideal Mix $T_{T\,mix}$ (°R)	Ideal Mix V_{mix} (FPS)	V_{mix}/C_a	Test Chamber T_a (°F)	Test Chamber P_a (PSI)	Test Chamber RH_a	F_n (lb)
5711	2.133	1617.2	1957	3.144	2.014	705.5	1241	3.291	1.047	1150.9	1591	1.44	45	14.6	44	16650
5710	2.109	1610.2	1940	3.069	1.997	699.4	1229	3.278	1.068	1139.8	1573	1.43	45	14.6	44	16500
5709*	2.037	1575.2	1877	2.966	1.946	686.2	1196	3.232	1.090	1111.6	1523	1.38	46	14.6	43	15600
5708	1.962	1530.2	1804	2.943	1.900	678.5	1170	3.219	1.094	1085.2	1478	1.34	46	14.6	41	15000
5707	1.887	1473.2	1722	2.794	1.818	680.9	1134	3.131	1.121	1054.5	1411	1.28	46	14.6	40	13950
5706*	1.784	1444.2	1634	2.594	1.744	665.4	1085	3.027	1.167	1024.8	1338	1.21	46	14.6	40	12750
5705	1.719	1432.2	1578	2.502	1.693	647.0	1042	2.999	1.199	1004.1	1286	1.17	46	14.6	39	12100
5704	1.477	1321.2	1297.	2.024	1.524	635.2	931	2.790	1.379	923.6	1085	.98	46	14.6	37	8850
5703	1.422	1304.2	1227.	2.136	1.473	622.9	885	2.664	1.247	926.1	1837	.94	47	14.6	36	8200
5712	1.305	1250.7	1052	1.536	1.356	609.7	782	2.346	1.529	863.2	889	.81	43	14.6	47	6200

TABLE 4A

DEEP SCALLOPED LONG FLOWPATH MIXER; WITHOUT ENGINE SECONDARY FLOW SIMULATION; CONFIGURATION 4A

Condition	Primary				Fan				BPR	Ideal Mix			Test Chamber			Fn
Number	P_T/Pa	T_T (°R)	V (FPS)	W (lb/sec)	P_T/Pa	T_T (°R)	V (FPS)	W (lb/sec)		$T_{T\,mix}$ (°R)	V_{mix} (FPS)	V_{mix}/C_a	T_a (°F)	P_a (PSI)	RH_a	(lb)
6120	2.145	1605.7	1957	3.239	2.001	697.7	1230	3.104	0.958	1161.4	1601.3	1.45	47	14.5	64	16800
6119	2.122	1605.7	1944	3.203	1.982	694.8	1219	3.072	0.959	1159.8	1589.1	1.44	47	14.5	63	16650
6118*	2.085	1561.7	1896	3.158	1.963	696.5	1213	3.095	0.980	1133.5	1557.9	1.41	47	14.5	62	16100
6117	1.986	1516.7	1812	3.031	1.885	681.3	1167	3.044	1.004	1098.2	1488.9	1.35	47	14.5	62	15100
6116	1.863	1466.7	1700	2.826	1.792	668.3	1111	2.952	1.044	1058.9	1399.2	1.27	47	14.5	63	13800
6115*	1.800	1436.7	1640	2.838	1.755	664.8	1089	2.909	1.025	1046.0	1361.1	1.23	47	14.5	63	13100
6114	1.747	1454.6	1612	2.586	1.711	647.7	1053	2.891	1.118	1028.7	1316.9	1.19	48	14.5	64	12400
6113	1.486	1319.8	1303	2.075	1.513	616.2	908	2.658	1.281	924.7	1081.2	0.98	48	14.5	65	8850
6112	1.451	1296.9	1256	2.038	1.472	617.1	880	2.547	1.256	918.4	1046.7	0.95	48	14.5	67	8350
6111	1.314	1258.6	1065	1.649	1.366	613.8	791	2.334	1.415	880.8	904.5	0.82	48	14.5	66	6350

TABLE 5A

CUTBACK SCALLOPED LONG FLOWPATH MIXER; WITHOUT ENGINE SECONDARY FLOW SIMULATION; CONFIGURATION 5A

Condition	Prima y				Fan				BPR	Ideal Mix			Test Chamber			Fn
Number	P_T/Pa	T_T (°R)	V (FPS)	W (lb/sec)	P_T/Pa	T_T (°R)	V (FPS)	W (lb/sec)		$T_{T\,mix}$ (°R)	V_{mix} (FPS)	V_{mix}/C_a	T_a (°F)	P_a (PSI)	RH_a	(lb)
6510	2.140	1616.7	1960	3.282	2.018	694.2	1232	3.231	0.984	1159.2	1598.9	1.44	51	14.9	18	16650
6509	2.136	1608.7	1953	3.266	2.023	701.6	1241	3.270	1.001	1154.9	1596.8	1.44	51	15.0	18	16650
6508*	2.067	1557.7	1884	3.210	1.961	689.6	1206	3.210	1.000	1123.7	1545.0	1.39	51	15.0	17	15800
6507	1.976	1524.7	1812	3.080	1.878	675.9	1159	3.121	1.013	1097.6	1483.4	1.34	51	15.0	17	14950
6506	1.872	1480.7	1716	2.829	1.801	664.0	1112	3.033	1.041	1064.1	1407.9	1.30	29	14.9	18	14750
6505*	1.806	1433.9	1644	2.714	1.756	657.8	1085	2.996	1.059	1034.7	1356.5	1.25	29	14.9	18	13400
6504	1.739	1408.1	1578	3.714	1.695	650.7	1046	2.904	1.070	1016.6	1303.0	1.20	29	14.9	18	12600
6503	1.485	1318.5	1301	2.135	1.517	625.7	918	2.717	1.273	930.5	1086.5	1.00	32	14.9	17	9200
6502	1.440	1291.4	1241	2.043	1.471	619.4	882	2.618	1.282	913.9	1039.3	0.96	32	14.9	16	8500
6501	1.310	1270.6	1067	1.701	1.361	603.0	782	2.396	1.405	880.2	900.4	0.83	34	14.9	16	6500

TABLE 6A

CUTBACK NON-SCALLOPED LONG FLOWPATH MIXER; WITHOUT SECONDARY FLOW SIMULATION; CONFIGURATION 6A

Condition	Primary				Fan				BPR	Ideal Mix			Test Chamber			Fn
Number	P_T/Pa	T_T (°R)	V (FPS)	W (lb/sec)	P_T/Pa	T_T (°R)	V (FPS)	W (lb/sec)		$T_{T\,mix}$ (°R)	V_{mix} (FPS)	V_{mix}/C_a	T_a (°F)	P_a (PSI)	RH_a	(lb)
6310	2.142	1617.7	1964	3.269	1.999	697.2	1230	3.197	0.978	1162.6	1601.1	1.46	39	14.9	22	17000
6309	2.130	1604.7	1944	3.257	1.997	698.0	1229	3.215	0.987	1154.3	1588.8	1.45	38	14.9	22	16800
6308*	2.073	1570.7	1888	3.163	1.965	691.9	1207	3.226	1.020	1126.9	1544.1	1.41	39	14.9	22	16100
6307	1.975	1477.7	1781	3.061	1.870	678.1	1157	3.084	1.007	1076.5	1467.9	1.34	39	14.9	21	15000
6306	1.858	1466.7	1694	2.830	1.791	668.1	1112	3.045	1.076	1052.8	1392.3	1.27	39	14.9	21	13800
6305*	1.797	1426.3	1634	2.762	1.754	662.8	1085	3.042	1.102	1026.0	1346.2	1.23	39	14.9	21	13100
6304	1.743	1419.1	1588	2.658	1.708	649.6	1052	2.979	1.121	1012.4	1304.7	1.19	39	14.9	21	12400
6303	1.483	1333.7	1307	2.084	1.521	624.0	917	2.766	1.327	929.0	1084.6	0.99	39	14.9	21	9000
6302	1.441	1308.7	1251	2.032	1.464	619.4	877	2.592	1.276	922.3	1041.3	0.95	39	14.9	21	8350
6301	1.314	1264.2	1067	1.688	1.360	601.6	778	2.408	1.426	874.7	897.1	0.82	39	14.9	20	6350

TABLE 7A

DEEP SCALLOPED LONG FLOWPATH MIXER; WITH ENGINE SECONDARY FLOW SIMULATION; CONFIGURATION 7A

Condition	Primary				Fan					Ideal Mix			Test Chamber			Fn
Number	P_T/Pa	T_T (°R)	V (FPS)	W (lb/sec)	P_T/Pa	T_T (°R)	V (FPS)	W (lb/sec)			V_{mix} (FPS)	V_{mix}/C_a	T_a (°F)	P_a (PSI)		(lb)
7510	2.118	1629.4	1950.3	3.172	2.000	697.5	1224.4	3.063	0.966	1171.5	1593.6	1.44	49	14.5	20	16650
7509	2.136	1661.4	1980.3	3.141	1.991	691.0	1215.0	3.068	0.976	1182.1	1602.3	1.45	46	14.5	19	16800
7508*	2.069	1546.7	1872.0	3.052	1.958	682.7	1193.9	3.093	1.013	1111.9	1530.8	1.42	25	14.5	18	16300
7507	1.979	1518.4	1804.5	3.097	1.892	687.7	1172.1	2.932	0.947	1114.4	1496.9	1.39	20	14.5	18	15800
7506	1.859	1460.0	1691.8	2.789	1.773	678.9	1108.3	2.835	1.016	1066.3	1397.7	1.30	19	14.5	18	14250
7505	1.797	1438.5	1635.7	2.660	1.745	664.8	1081.9	2.874	1.080	1036.8	1348.2	1.26	19	14.6	17	13600
7504	1.740	1424.0	1585.3	2.554	1.701	656.9	1052.7	2.806	1.098	1022.5	1306.4	1.22	19	14.6	17	12900
7503	1.471	1324.4	1290.4	1.994	1.542	627.8	935.9	2.725	1.367	922.1	1085.7	1.01	18	14.6	17	9350
7502	1.447	1290.1	1264.9	1.980	1.492	620.5	908.3	2.628	1.327	908.3	1061.5	0.97	35	14.7	25	8700
7501	1.310	1275.1	1086.4	1.609	1.372	599.0	800.1	2.361	1.467	873.1	916.2	0.84	35	14.7	24	6650

TABLE 8A

CUTBACK SCALLOPED LONG FLOWPATH MIXER; WITH 7.6" ENGINE EXTENSION; WITHOUT ENGINE SECONDARY FLOW SIMULATION; CONFIGURATION 8A

Condition	Primary				Fan				BPR	Ideal Mix			Test Chamber			Fn
Number	P_T/P_a	T_T (°R)	V (FPS)	W (lb/sec)	P_T/P_a	T_T (°R)	V (FPS)	W (lb/sec)		$T_{T\,mix}$ (°R)	V_{mix} (FPS)	V_{mix}/C_a	T_a (°F)	P_a (PSI)	RH_a	(lb)
7610	2.141	1598.4	1950.5	3.236	2.015	693.0	1230.3	3.054	0.944	1158.7	1600.8	1.45	46	14.5	28	16800
7609	2.133	1614.0	1955.4	3.215	1.994	696.5	1225.4	3.002	0.934	1170.9	1602.9	1.45	46	14.5	27	16800
7608	2.060	1558.4	1880.7	3.125	1.959	685.2	1201.3	3.012	0.964	1129.8	1547.2	1.40	46	14.5	25	16000
7607	1.980	1521.0	1809.8	3.037	1.889	678.4	1165.2	2.916	0.960	1108.3	1494.1	1.36	45	14.5	24	15300
7606	1.859	1466.3	1698.1	2.875	1.790	667.7	1108.6	2.782	0.968	1073.5	1408.1	1.28	43	14.5	22	13950
7605	1.788	1441.7	1634.9	2.771	1.742	660.3	1079.8	2.735	0.987	1053.6	1359.2	1.24	42	14.5	21	13250
7604	1.735	1404.3	1573.4	2.699	1.694	648.8	1044.4	2.673	0.990	1028.4	1310.2	1.19	42	14.5	20	12400
7602	1.435	1313.0	1246.8	2.105	1.468	620.3	880.3	2.238	1.063	956.1	1058.0	0.96	42	14.5	19	8500
7601	1.315	1273.1	1074.5	1.797	1.356	607.3	779.7	1.722	0.958	947.3	930.3	0.85	43	14.5	18	6750

TABLE 10A

SEVERE CUTBACK SHORT FLOWPATH MIXER; WITH ENGINE SECONDARY FLOW SIMULATION; CONFIGURATION 10A

Condition	Primary				Fan				BPR	Ideal Mix			Test Chamber			Fn
Number	P_T/P_a	T_T (°R)	V (FPS)	W (lb/sec)	P_T/P_a	T_T (°R)	V (FPS)	W (lb/sec)		$T_{T\,mix}$ (°R)	V_{mix} (FPS)	V_{mix}/C_a	T_a (°F)	P_a (PSI)	RH_a	(lb)
7810	2.144	1602.0	1952.3	3.235	2.008	699.0	1231.8	2.922	0.903	1173.5	1610.4	1.44	64	14.5	21	16650
7809	2.123	1600.7	1940.8	3.206	1.982	697.4	1220.5	2.883	0.899	1173.1	1599.8	1.43	64	14.5	21	16500
7808*	2.059	1567.7	1884.5	3.108	1.948	687.1	1197.2	2.916	0.938	1141.5	1551.8	1.38	64	14.5	21	15600
7807	1.995	1519.7	1817.2	3.031	1.880	677.1	1158.9	2.843	0.938	1111.9	1498.6	1.34	63	14.5	21	15000
7806	1.860	1463.3	1697.8	2.837	1.776	667.0	1101.7	2.729	0.962	1072.9	1405.5	1.25	63	14.5	21	13400
7805*	1.798	1429.9	1635.1	2.725	1.748	657.5	1080.4	2.765	1.014	1041.0	1355.8	1.21	63	14.5	21	12750
7804	1.734	1398.7	1569.0	2.608	1.693	647.9	1042.7	2.714	7.041	1015.8	1300.6	1.16	63	14.5	21	11900
7803	1.486	1323.7	1306.0	2.084	1.509	631.1	916.6	2.474	1.187	947.8	1094.7	0.97	65	14.5	20	8700
7802	1.430	1290.1	1230.1	1.982	1.451	616.3	865.2	2.358	1.189	924.1	1031.9	0.92	65	14.5	20	7850
7801	1.309	1244.1	1052.9	1.633	1.357	596.9	773.5	2.221	1.360	871.1	891.9	0.79	65	14.5	20	6000

TABLE 11A

SEVERE CUTBACK SHORT FLOWPATH MIXER; WITHOUT ENGINE SECONDARY FLOW SIMULATION; CONFIGURATION 11A

Condition	Primary				Fan				BPR	Ideal Mix			Test Chamber			Fn
Number	P_T/Pa	T_T (°R)	V (FPS)	W (lb/sec)	P_T/Pa	T_T (°R)	V (FPS)	W (lb/sec)		$T_{T\,mix}$ (°R)	V_{mix} (FPS)	V_{mix}/C_a	T_a (°F)	P_a (PSI)	RH_a	(lb)
7910	2.151	1622.0	1968.6	3.424	2.010	704.0	1237.0	2.864	0.836	1204.0	1635.5	1.46	62	14.6	18	17000
7909	2.137	1631.0	1966.6	3.356	1.999	704.1	1232.7	2.851	0.850	1205.1	1629.4	1.46	61	14.6	18	17000
7908*	2.070	1571.0	1893.3	3.272	1.974	692.3	1213.4	2.929	0.895	1156.0	1572.2	1.41	59	14.6	18	16100
7907	1.989	1529.4	1821.8	3.165	1.898	683.3	1174.0	2.841	0.898	1129.1	1515.3	1.36	58	14.6	18	15300
7906	1.861	1471.4	1705.8	2.921	1.794	669.3	1114.6	2.779	0.952	1080.2	1417.5	1.27	57	14.6	18	13800
7905	1.803	1443.0	1648.3	2.846	1.752	663.3	1088.7	2.728	0.958	1061.5	1374.5	1.23	56	14.6	19	13100

APPENDIX B

ACOUSTIC DATA, MEASURED MODEL AND SCALED TO JT8D ENGINE

This appendix contains the one-third octave band acoustic data obtained on the contract configurations. Two types of data are presented,

a.) Measured Model Data: The as-measured data were corrected for microphone and cable frequency response calibrations, and are presented for the microphone distance of 15 ft. used in the test. Since the test chamber is anechoic, the data are free-field and are not contaminated by sound wave reflections.

Atmospheric absorption corrections were used to analytically correct data from test chamber conditions to FAA day (77°F, 70% relative humidity). These corrections were obtained from the formulas of ref. (3). The SPL values from 100 to 80,000 Hz were integrated to provide Overall Sound Pressure Levels (OSPL) for each angle.

b.) Data Scaled To Predict Full Size JT8D Engine: In order to scale model data to predict full size engine noise, it is necessary first to eliminate the effects of atmospheric absorption on the measured noise spectra. This is done by determining the reduction of SPL levels due to the atmospheric absorption present during the model test, and adding these values to the measured levels, thus producing the true source noise spectra. Since the data were corrected to reflect the atmospheric absorption that would occur on an FAA day to present the model data on a consistent basis in step a.), the additional correction to obtain the true source spectra was added to the FAA day model data. Then the data were scaled to JT8D engine size (7 times linear model dimensions) by reducing the frequency values by a factor of 7.0 and by adding the factor 20 log(7) to the SPL level of each third-octave band. The scaled data then were extrapolated to 1200 ft. linear distance by subtracting $20 \log \frac{1200}{15 \sin\theta}$ to account for spherical divergence. Atmospheric attenuation corrections necessary to present the full scale data on an FAA day were applied per ref. 3. The Overall Sound Pressure Level (OASPL) and Perceived Noise Levels (PNL) for each angle are listed at the bottom of the SPL values for each angle. Also listed are the PNL values for 400, 2000, 4000, and 6000 foot linear distances.

The heading information at the top of the data sheets contains pertinent nozzle information in both U.S. customary units as well as the International System of Units (S.I.). However, a more complete listing of conditions is presented in Appendix A. The identification number for each data point is found in the top right hand corner of each data table listed after condition.

To facilitate use of the acoustic data, the sheets have been assembled by increasing condition numbers. Thus, to locate the data for a particular configuration and operating conditions, first find the condition number from the tables of Appendix A.

Basic Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 1A; Condition 5301

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 705307 TEST DATE 11/04/76 SCALE RATIO 7.0/1 RUN NUMBER 70057 CONDITION 5301

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		1.39	1.37		1.39	1.37
TEMP	(R)	1240.0	616.0	(K)	688.9	342.2
RHO	LB/FT3	0.035	0.071	KG/M3	0.563	1.136
VEL	FPS	1160.0	707.1	M/S	353.6	243.0

MASS FLOW LB/S
THRUST,IDL LB
THRUST,MEA LB
AREA (MOD) SQFT
W (MODEL) LB/S

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (MILLED)

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PWL
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.125	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.160	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.200	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.315	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.400	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.630	[illegible]	[illegible]	82.5	85.4	[illegible]	86.0	88.7	91.4	94.0	97.4	97.1	[illegible]
.800	80.6	81.7	82.2	84.0	84.5	86.3	88.6	93.0	94.7	96.4	97.4	[illegible]
1.00	80.9	81.0	82.6	84.3	85.3	87.1	89.7	92.1	94.1	95.3	97.5	[illegible]
1.25	80.5	81.8	83.1	84.1	85.5	87.3	89.9	92.3	94.1	93.6	96.4	[illegible]
1.60	80.7	82.6	83.3	84.4	85.7	87.5	90.1	91.9	93.2	92.5	89.0	[illegible]
2.00	80.6	82.3	83.7	84.9	86.2	87.5	90.2	92.2	92.7	90.9	87.9	[illegible]
2.50	81.2	82.9	84.0	85.4	86.5	88.2	90.5	92.6	92.2	89.9	86.4	[illegible]
3.15	81.7	82.7	84.1	85.4	86.6	88.5	90.9	91.6	91.3	89.6	85.8	[illegible]
4.00	81.9	83.1	84.2	85.7	86.9	88.8	90.6	91.4	90.8	88.3	85.6	[illegible]
5.00	81.9	82.8	84.1	85.4	86.7	88.5	90.4	90.6	90.6	87.4	83.7	[illegible]
6.30	81.8	82.0	83.8	85.3	86.5	88.2	90.2	89.4	89.0	86.6	82.0	[illegible]
8.00	80.2	82.0	83.2	84.7	86.1	87.8	89.2	89.1	87.7	85.1	81.3	[illegible]
10.0	79.7	81.3	82.6	84.1	85.4	87.6	88.7	88.0	86.6	83.5	79.7	[illegible]
12.5	79.0	80.2	81.8	83.1	84.5	86.0	87.6	86.6	84.8	81.4	77.4	[illegible]
16.0	78.1	79.3	80.6	82.3	83.5	83.1	[illegible]	85.5	83.2	79.7	75.2	[illegible]
20.0	78.3	77.7	79.2	80.6	81.9	83.4	84.6	83.2	81.1	77.2	72.7	[illegible]
25.0	75.2	76.7	78.1	79.5	80.9	81.8	82.9	81.1	79.5	75.2	70.2	[illegible]
31.5	73.2	74.7	76.3	77.9	79.2	80.0	81.2	79.3	77.0	73.6	68.7	[illegible]
40.0	71.3	72.8	74.7	75.9	77.7	78.0	79.1	77.5	74.9	71.1	67.4	[illegible]
50.0	69.1	76.4	72.6	73.0	74.8	75.4	76.3	74.9	72.4	68.8	67.8	[illegible]
63.0	66.2	67.4	69.6	70.5	71.7	71.8	73.6	72.2	69.9	67.3	64.1	[illegible]
80.0	62.9	64.6	65.7	66.5	68.7	69.2	69.7	69.3	67.8	65.5	68.9	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	93.7	94.7	95.8	97.2	98.3	100.1	102.1	103.6	104.9	106.2	107.1	

LEVEL = [illegible]

b.) Model Data Scaled To Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 705307 TEST DATE 11/04/76 SCALE RATIO 7.0/1 RUN NUMBER 70057 CONDITION 5301

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		1.39	1.37		1.39	1.37
TEMP	(R)	1240.0	616.0	(K)	688.9	342.2
RHO	LB/FT3	0.035	0.071	KG/M3	0.563	1.136
VEL	FPS	1160.0	707.1	M/S	353.6	243.0

MASS FLOW LB/S
THRUST,IDL LB
THRUST,MEA LB
AREA (MOD) SQFT
W (MODEL) LB/S

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	55.4	55.7	56.5	57.9	58.7	61.0	61.6	63.4	65.3	66.7	66.4
63	56.8	59.3	60.0	61.1	61.8	63.1	64.0	66.1	66.1	69.6	70.0
80	58.2	58.7	59.7	61.4	61.7	63.7	64.6	66.3	69.3	70.7	68.6
100	58.6	59.3	61.0	62.0	62.7	64.1	66.0	67.6	69.2	69.8	65.9
125	57.9	59.8	60.7	62.6	63.6	64.2	[illegible]	67.8	69.3	69.3	66.2
160	58.1	59.5	61.0	62.8	63.7	65.6	66.9	68.2	69.2	67.4	61.4
200	57.7	59.7	61.5	62.6	63.9	65.2	67.1	68.4	68.6	65.9	59.4
250	57.8	59.8	61.6	62.0	64.6	65.3	67.2	67.8	67.5	64.4	57.0
315	57.4	59.9	61.7	63.1	64.2	65.5	67.0	67.8	66.6	62.3	55.4
400	57.9	60.4	61.9	63.5	64.4	65.7	67.2	67.5	66.0	61.1	53.5
500	58.1	59.9	61.8	63.3	64.3	65.7	67.3	66.8	64.7	59.8	52.3
630	58.1	60.1	61.7	63.3	64.4	65.8	67.2	66.3	63.9	58.6	56.0
800	57.7	59.4	61.2	62.7	63.8	65.1	66.2	65.1	62.5	57.6	48.4
1000	57.1	58.8	60.4	62.1	63.7	64.4	65.5	63.8	60.8	55.3	46.2
1250	55.8	57.7	59.4	61.1	62.3	63.5	64.3	62.4	58.8	52.9	43.3
1600	53.6	56.2	58.1	59.8	60.9	61.9	62.6	60.3	56.5	49.7	39.4
2000	52.0	54.3	56.5	58.0	59.2	60.1	60.6	57.9	53.5	46.0	34.7
2500	49.9	52.3	54.3	56.0	57.2	[illegible]	58.3	55.4	50.2	42.1	29.2
3150	46.6	49.4	51.6	53.3	54.3	55.1	54.9	51.4	46.6	36.8	21.9
4000	43.5	46.5	48.8	50.5	51.6	51.6	51.2	47.6	41.0	31.0	14.3
5000	40.7	3.9	46.6	48.3	49.3	49.2	48.7	44.2	37.0	27.1	9.9
6300	36.4	39.8	42.8	44.3	45.3	45.6	44.2	39.5	32.8	20.2	0.9
8000	31.3	34.8	37.6	39.0	40.4	39.8	38.5	33.5	25.2	11.9	0.0
10000	21.8	25.8	29.6	31.6	33.7	34.2	28.4	22.9	12.9	0.0	0.0
OASPL	69.6	71.4	73.0	74.5	75.4	76.8	78.2	78.6	78.6	77.8	75.2
PNL	76.0	78.3	80.4	81.9	83.0	84.1	84.9	83.9	82.1	77.9	71.8

400. SIDELINE											
PNL	89.2	91.3	93.1	94.7	95.9	97.0	97.8	96.5	96.3	90.5	84.9
2000. SIDELINE											
PNL	69.0	71.4	73.4	75.1	76.1	77.2	78.2	77.5	75.7	71.5	65.1
4000. SIDELINE											
PNL	59.0	61.7	63.6	65.3	66.3	67.4	68.5	67.9	66.1	61.9	55.4
6000. SIDELINE											
PNL	52.9	55.3	57.3	59.1	60.0	61.1	62.2	61.7	59.8	55.8	48.7

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

... Long ... Mixer Without Engine Secondary Flow Simulation; Configuration 1A; Condition 5302

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 705307 TEST DATE 11/04/76 SCALE RATIO 7.0/1 RUN NUMBER 20053 CONDITION 5302

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		1.51	1.45		1.51	1.45	THRUST,IDL	LB			N		
TEMP	(R)	1250.0	623.0	(K)	694.4	346.1	THRUST,MEA	LB		0.0	N		0.0
RHO	LB/FT3	0.036	0.071	KG/M3	0.571	1.141	AREA (MOD)	SQFT			SQM		
VEL	FPS	1290.3	867.0	M/S	393.3	264.3	W (MODEL)	LB/S	2.2	2.6	KG/S	1.0	1.2

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (RE.0002)

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	POWER RE-12W
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	75.8	75.8	77.5	78.7	78.4	79.1	80.8	82.9	84.6	88.3	93.4	0.0
.125	75.4	78.8	78.3	78.3	79.9	81.1	86.5	83.3	87.1	90.0	93.6	105.2
.160	76.7	79.0	79.0	79.5	78.7	79.2	80.9	82.7	87.4	91.9	95.4	106.2
.200	77.5	77.4	79.2	80.5	81.5	[illegible]	84.5	86.7	91.4	95.8	98.2	107.6
.250	78.5	79.5	80.1	81.7	82.5	85.7	85.6	88.4	93.0	97.5	99.1	110.6
.315	81.1	81.6	81.7	82.9	84.3	87.0	88.0	91.0	95.4	99.4	102.7	112.2
.400	83.1	85.0	85.4	86.3	87.6	89.4	91.5	94.5	98.7	102.7	106.7	114.0
.500	85.2	84.8	85.5	87.6	87.9	91.6	93.7	94.8	100.2	103.9	105.8	116.0
.630	86.8	86.1	87.1	88.2	88.9	90.6	93.5	96.7	100.4	104.5	104.2	116.0
.800	85.5	86.5	86.7	88.6	89.4	90.6	93.3	96.7	100.4	105.8	105.2	116.9
1.00	85.5	85.6	86.9	88.4	89.9	91.7	96.4	97.4	100.1	101.8	100.5	116.0
1.25	86.7	86.0	87.7	88.4	90.0	91.7	94.7	97.5	99.7	100.0	97.8	117.1
1.60	84.8	86.2	87.3	88.6	90.2	92.1	94.9	97.2	98.7	98.6	96.0	1?7.1
2.00	84.7	86.2	87.6	88.9	90.5	92.5	95.1	97.4	98.3	96.7	93.8	116.5
2.50	85.2	86.6	87.9	89.3	90.8	92.6	95.4	97.1	97.5	95.5	92.6	116.2
3.15	85.6	86.6	88.3	89.5	91.1	93.1	95.6	96.8	96.7	94.6	91.3	115.9
4.00	85.8	86.9	88.1	89.7	91.3	93.2	95.6	96.6	96.0	93.5	90.5	115.7
5.00	86.6	86.7	88.1	89.5	91.1	93.6	95.1	95.8	95.3	92.6	89.2	115.5
6.30	85.8	86.7	87.8	89.3	91.1	92.9	94.9	95.3	94.4	92.1	88.6	115.0
8.00	84.4	86.1	87.4	88.9	90.7	92.5	94.4	94.5	93.4	91.1	87.6	114.6
10.0	83.8	85.3	86.9	88.4	90.1	91.8	93.7	93.5	92.4	90.0	86.4	114.0
12.5	83.7	84.5	86.3	87.8	89.3	91.1	92.8	92.4	90.6	88.4	84.6	113.2
16.0	82.7	83.6	85.2	86.9	88.6	90.3	91.9	91.3	89.1	86.7	82.6	112.2
20.0	81.6	82.1	83.7	85.4	86.8	88.5	89.9	89.1	87.0	84.1	79.6	111.?
25.0	79.7	81.3	82.7	84.3	85.9	87.1	88.3	86.9	85.3	81.8	77.2	109.3
31.5	77.7	79.1	81.3	82.7	84.3	85.3	86.6	85.2	82.8	79.6	74.5	107.0
40.0	75.7	77.3	79.2	80.8	82.3	83.4	84.6	82.9	80.5	77.4	72.4	106.0
50.0	73.1	74.6	76.6	77.8	79.7	80.6	81.5	80.0	77.8	74.8	71.6	104.0
63.0	70.2	71.6	73.5	75.0	76.6	76.8	78.2	76.9	75.1	73.3	72.3	101.7
80.0	66.4	67.1	70.6	71.6	73.3	73.9	74.7	73.2	72.5	73.4	71.7	98.1
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	96.0
												0.0
OSPL	97.9	98.9	100.6	101.4	102.9	104.7	106.9	108.6	110.4	112.3	113.4	OAPWL = 124.2

b.) Model Data Scaled To Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 705307 TEST DATE 11/04/76 SCALE RATIO 7.0/1 RUN NUMBER 20053 CONDITION 5302

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	108.8	125.4	KG/S	49.3	56.9
P.R.		1.51	1.45		1.51	1.45	THRUST,IDL	LB			N		
TEMP	(R)	1250.0	623.0	(K)	694.4	346.1	THRUST,MEA	LB		0.0	N		0.0
RHO	LB/FT3	0.036	0.071	KG/M3	0.571	1.141	AREA (MOD)	SQFT			SQM		
VEL	FPS	1290.3	867.0	M/S	393.3	264.3	W (MODEL)	LB/S	2.2	2.6	KG/S	1.0	1.2

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	58.6	59.2	60.3	61.6	62.9	65.2	65.5	68.6	70.2	72.6	71.9
63	60.6	63.2	64.0	65.0	66.2	67.6	69.0	70.9	73.5	75.3	75.9
80	62.7	63.0	64.5	65.7	66.5	69.2	69.2	71.2	75.6	76.5	75.0
100	64.1	64.2	65.6	66.8	67.4	68.7	70.8	72.9	75.0	76.9	73.6
125	62.8	64.6	65.2	67.2	67.9	68.7	70.6	72.9	75.0	76.2	74.0
160	62.7	63.7	65.3	66.9	68.3	69.6	71.6	73.5	74.6	73.9	69.0
200	61.9	63.9	65.6	66.9	68.4	69.6	71.9	73.6	74.2	72.1	66.3
250	61.9	64.0	65.6	67.0	68.5	69.9	72.0	73.1	73.0	70.5	64.2
315	61.5	63.8	65.6	67.1	68.5	70.1	71.9	73.0	72.2	68.1	61.3
400	61.9	64.1	65.8	67.4	68.7	70.1	72.1	72.6	71.3	66.7	59.1
500	62.0	64.0	66.0	67.4	68.8	70.3	72.0	72.0	70.1	65.4	57.8
630	62.0	63.9	65.6	67.3	68.8	70.2	71.8	71.5	69.1	63.8	56.3
800	61.8	63.3	65.2	66.8	68.2	69.6	70.9	70.3	67.8	62.2	53.9
1000	61.1	62.9	64.5	66.1	67.8	69.1	70.2	69.2	66.2	60.8	52.0
1250	59.2	61.8	63.6	65.3	66.9	68.2	69.2	67.8	64.5	58.9	49.6
1600	57.7	60.2	62.4	64.1	65.6	66.7	67.6	65.8	62.3	56.2	46.1
2000	56.7	58.6	61.0	62.7	64.0	65.2	65.8	63.7	59.3	53.0	41.9
2500	54.5	56.8	58.9	60.8	62.3	63.3	63.7	63.0	56.1	49.1	36.6
3150	51.3	53.8	56.1	58.1	59.2	60.2	60.2	57.3	51.9	43.7	29.3
4000	48.6	51.1	53.4	55.3	56.6	56.9	56.6	52.8	47.4	37.6	21.3
5000	45.2	48.3	51.4	53.1	54.4	54.5	54.1	50.6	43.6	33.7	15.7
6300	40.8	44.3	47.3	49.2	50.4	50.4	49.7	44.9	37.7	26.5	5.9
8000	35.3	39.0	42.2	43.8	45.3	45.0	43.7	38.6	30.6	17.9	0.0
10000	25.6	30.0	33.5	35.5	36.6	35.2	33.6	27.6	18.1	3.3	0.0
OASPL	73.9	75.6	77.2	78.7	80.0	81.4	82.9	83.0	84.3	84.1	81.0
PNL	80.6	82.8	84.8	86.5	88.0	89.1	90.0	89.4	87.8	84.8	79.6

400. SIDELINE

PNL	93.7	95.7	97.6	99.3	100.8	102.0	103.0	102.0	99.9	97.1	92.3

2000. SIDELINE

PNL	73.4	75.7	77.0	79.5	80.9	82.1	83.2	83.0	81.4	78.4	73.1

4000. SIDELINE

PNL	63.5	65.9	68.0	69.6	71.0	72.2	73.5	73.4	72.0	68.9	63.4

6000. SIDELINE

PNL	57.1	59.7	61.7	63.4	64.8	66.0	67.3	67.2	66.0	62.9	57.4

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Basic Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 1A; Condition 5303

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 765367 TEST DATE 11/04/76 SCALE RATIO 7.07 RUN NUMBER 20053 CONDITION 5303

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S		0.0	0.0 KG/S		0.0	0.0
P.R.		1.53	1.40		1.53	1.40	THRUST,IDL LB						
TEMP	(R)	1317.0	626.0	(K)	731.7	347.8	THRUST,MEA LB		0.0	N		0.0	
RHO	LB/FT3	0.034	0.071	KG/M3	0.543	1.143	AREA (MOD) SQFT			SQM			
VEL	FPS	1346.3	895.3	M/S	410.3	272.9	W (MODEL) LB/S		2.2	2.6 KG/S		1.0	1.2

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL – (ROUND GROUND SPL)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	POWER DB-12W
					MICROPHONE ANGLES IN DEGREES							
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	76.4	76.9	78.4	79.6	79.6	80.3	81.9	84.0	85.5	89.3	94.5	106.3
.125	76.6	79.0	79.2	79.1	80.6	81.6	81.6	84.1	87.9	90.8	94.0	107.1
.160	80.7	81.0	80.0	80.4	79.7	80.1	81.0	83.3	88.4	93.1	96.7	109.3
.200	78.7	78.4	80.5	82.0	82.0	83.3	85.6	87.5	92.5	97.1	99.5	111.0
.250	79.4	80.3	81.1	81.0	83.4	84.7	86.0	89.0	94.3	98.0	101.2	113.5
.315	82.0	82.0	82.7	84.0	85.3	88.7	89.0	92.5	96.3	100.6	104.6	115.7
.400	84.7	85.9	86.5	87.4	88.7	90.6	92.3	95.6	99.8	104.1	106.6	117.1
.500	86.9	85.4	86.4	88.1	89.1	91.5	92.7	96.1	101.7	105.6	107.5	118.1
.630	88.3	87.4	88.2	89.3	90.2	91.7	94.7	97.9	102.0	106.7	106.1	120.3
.800	88.7	87.9	88.1	89.5	90.8	91.7	94.4	97.9	102.0	105.8	107.3	120.5
1.00	86.9	87.1	89.1	89.7	91.1	93.6	95.8	98.7	101.8	103.6	102.8	119.3
1.25	85.8	87.2	88.4	89.4	91.3	91.0	96.0	98.9	101.2	101.6	100.1	120.3
1.60	86.2	87.3	88.4	89.8	91.6	93.3	96.2	98.7	100.2	100.2	96.6	117.9
2.00	85.9	87.4	88.7	90.2	91.9	93.0	96.5	98.9	99.7	98.3	95.7	117.0
2.50	86.4	87.0	89.1	90.7	92.2	94.6	96.8	98.6	98.4	97.1	93.6	117.3
3.15	86.7	87.8	89.2	90.6	92.4	94.4	97.0	98.4	98.2	95.4	92.8	117.1
4.00	87.0	88.2	89.3	91.1	92.8	94.6	98.2	98.2	97.6	95.7	92.2	117.0
5.00	87.3	88.6	89.2	90.9	92.7	94.7	96.8	97.5	96.9	94.3	91.0	116.0
6.30	87.2	88.0	89.1	90.9	92.5	94.6	96.0	97.1	96.2	94.1	90.8	116.3
8.00	85.7	87.5	88.7	90.6	92.4	94.2	96.2	96.4	95.6	93.5	90.1	115.0
10.0	85.6	86.8	88.1	89.4	91.7	93.5	95.5	95.4	94.5	92.5	88.4	115.0
12.5	84.9	86.6	87.5	89.2	90.9	92.8	94.1	94.1	92.7	90.9	87.0	114.0
16.0	84.1	85.3	86.5	88.5	90.2	92.0	93.7	93.1	91.3	89.2	84.9	113.0
20.0	82.3	83.7	85.6	86.9	88.5	90.2	91.6	90.8	89.6	86.4	81.9	111.0
25.0	80.9	82.1	84.0	85.0	87.4	88.7	90.1	88.7	87.1	84.0	79.5	109.5
31.5	78.7	80.5	82.4	84.1	85.7	86.7	88.2	86.6	84.3	81.6	76.7	107.5
40.0	76.3	78.3	80.6	82.3	83.8	84.9	86.6	84.4	82.0	79.2	74.7	105.5
50.0	74.2	76.0	78.0	79.2	81.1	81.9	83.0	81.5	79.1	76.5	73.5	104.6
63.0	72.1	72.8	74.9	76.4	77.9	78.1	79.5	78.2	76.1	74.4	74.1	97.3
80.0	67.2	69.6	71.1	72.4	74.6	75.2	76.1	74.7	73.2	72.1	73.5	96.1
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	99.2	100.1	101.2	102.0	104.3	106.1	106.6	110.3	111.5	114.0	115.3	OAPWL = 130.7

b.) Model Data Scaled To Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 765367 TEST DATE 11/04/76 SCALE RATIO 7.07 RUN NUMBER 20053 CONDITION 5303

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S		107.0	119.0 KG/S		48.5	54.0
P.R.		1.53	1.40		1.53	1.40	THRUST,IDL LB						
TEMP	(R)	1317.0	626.0	(K)	731.7	347.8	THRUST,MEA LB		0.0	N		0.0	
RHO	LB/FT3	0.034	0.071	KG/M3	0.543	1.143	AREA (MOD) SQFT			SQM			
VEL	FPS	1346.3	895.3	M/S	410.3	272.9	W (MODEL) LB/S			KG/S			

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
						ANGLE IN DEGREES					
50	59.5	60.2	61.3	62.7	63.9	66.9	68.5	68.9	71.1	73.2	73.2
63	62.7	64.1	65.1	66.1	67.7	68.8	69.8	72.0	74.6	76.7	77.2
80	63.9	64.1	65.5	66.8	67.7	69.7	70.2	72.5	76.5	78.2	76.7
100	65.6	65.5	66.7	67.9	68.7	69.6	72.0	74.1	76.6	78.6	76.9
125	64.6	66.0	[illegible]	68.5	69.3	69.8	71.7	74.1	76.6	78.2	76.1
160	64.1	65.6	66.5	68.2	69.5	70.5	73.0	74.0	76.3	75.7	71.3
200	63.0	65.1	67.0	67.9	69.7	70.9	73.2	75.6	75.7	73.7	68.6
250	63.3	65.1	66.7	68.2	69.9	71.1	73.3	74.6	74.5	72.1	66.2
315	62.7	65.0	66.7	68.4	69.9	71.2	73.3	74.5	73.6	69.7	63.2
400	63.1	65.3	67.0	68.0	70.1	71.5	73.5	74.1	72.7	68.3	60.7
500	63.1	65.0	66.9	68.7	70.1	71.6	73.4	73.6	71.6	66.7	59.3
630	63.2	65.2	66.8	68.7	70.3	71.6	73.4	73.1	70.7	65.5	58.6
800	63.1	64.6	66.3	68.2	69.8	71.3	72.6	72.6	69.4	63.9	55.7
1000	62.5	64.2	65.8	67.7	69.7	70.6	72.1	71.0	68.6	62.0	54.2
1250	60.5	63.2	64.9	67.0	68.6	69.9	71.6	69.7	66.7	61.3	52.1
1600	58.9	61.7	63.6	65.6	67.2	68.4	69.6	67.7	64.4	58.7	48.6
2000	57.4	60.1	62.2	64.1	65.6	66.4	67.7	65.4	61.4	55.5	44.3
2500	55.4	58.3	60.2	62.4	63.9	65.6	65.5	63.6	58.3	51.6	38.9
3150	52.6	55.4	57.4	59.6	60.9	61.9	61.9	59.0	53.9	46.6	31.6
4000	49.2	52.5	54.7	56.6	58.1	58.5	58.6	54.6	49.2	39.0	23.6
5000	46.2	49.7	52.5	54.5	55.0	55.9	55.7	51.5	45.1	35.7	17.9
6300	41.8	45.7	48.7	50.7	51.9	51.4	51.1	46.4	39.2	28.3	8.2
8000	36.4	40.4	43.0	45.2	46.7	46.1	45.2	40.1	31.9	19.4	0.6
10000	28.3	31.2	34.9	36.9	37.9	36.5	34.9	28.9	19.1	4.6	0.0
OASPL	75.2	76.0	78.3	80.6	81.4	82.7	84.4	85.2	85.0	85.0	83.5
PNL	81.9	84.2	86.1	88.0	89.5	90.7	91.7	91.6	89.5	86.9	81.9

	400. SIDELINE										
PNL	95.0	97.1	98.9	100.8	102.3	103.5	104.6	103.7	101.6	99.0	96.3
	2000. SIDELINE										
PNL	74.7	77.1	79.1	81.0	82.5	83.6	84.7	84.6	83.1	80.4	75.3
	4000. SIDELINE										
PNL	64.8	67.2	69.2	71.1	72.5	73.6	75.0	75.0	73.6	71.0	65.7
	6000. SIDELINE										
PNL	58.4	61.0	63.6	64.9	66.2	67.4	68.0	68.0	67.7	65.0	59.4

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Basic Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 1A; Condition 5304

a.) Model Data Measured At 15 Ft. Radius

```
STAND X206   RIG ID 705367   TEST DATE 11/04/76   SCALE RATIO 7.0/1   RUN NUMBER 20053   CONDITION 5304
          PRIMARY   FAN          PRIMARY   FAN                          PRIMARY   FAN          PRIMARY   FAN
AREA SQFT                  SQM                  MASS FLOW   LB/S    0.0     0.0    KG/S    0.0     0.0
P.R.        2.70    1.70          2.70    1.70  THRUST,IDL  LB                     N
TEMP (R)  1411.0   654.0   (K)   783.9   363.3  THRUST,MEA  LB        0.0          N                0.0
RHO LB/FT3 0.032   0.071  KG/M3  0.520   1.144  AREA (MOD)  SQFT                   SQM
VEL FPS   1547.9  1073.3   M/S   471.8   327.1  W (MODEL)   LB/S    2.4     3.4    KG/S    1.1     1.5
```

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (MODEL)

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	POWER DB-120
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	78.4	80.5	82.3	82.9	83.2	83.8	84.9	87.3	89.2	92.0	98.2	109.0
.125	80.6	83.6	82.7	82.7	84.4	85.5	85.0	87.0	91.7	94.6	98.0	110.9
.160	83.9	85.2	83.9	83.0	87.0	83.5	85.3	87.1	97.1	96.7	100.6	112.2
.200	82.4	82.3	83.6	85.2	86.5	87.0	89.1	90.8	96.5	100.8	103.6	115.0
.250	82.4	83.7	84.8	86.3	87.2	86.2	89.4	97.1	98.0	102.5	105.3	117.2
.315	85.3	85.5	86.3	87.6	88.6	92.3	92.3	96.3	100.5	104.6	108.5	119.0
.400	88.3	89.3	90.0	90.9	92.4	94.3	96.0	99.6	104.4	108.5	112.6	[illegible]
.500	90.2	89.9	90.0	91.9	92.7	95.5	96.6	100.3	106.6	110.7	112.3	[illegible]
.630	92.7	91.0	92.3	93.7	94.2	95.0	98.7	102.6	107.6	111.6	111.4	[illegible]
.800	91.0	92.5	92.5	94.3	95.2	95.7	98.4	102.0	107.7	112.2	113.5	120.4
1.00	92.0	91.9	92.7	94.0	95.5	97.4	100.1	103.5	107.5	110.7	110.9	[illegible]
1.25	90.9	92.3	93.2	94.2	96.6	97.3	100.5	103.9	106.0	108.7	109.3	[illegible]
1.60	90.7	92.1	93.6	94.1	95.7	97.4	100.6	103.7	105.6	106.0	107.3	[illegible]
2.00	90.1	91.7	92.8	94.2	96.6	97.6	100.9	103.7	105.1	104.4	104.2	[illegible]
2.50	90.2	91.6	93.6	94.4	96.3	98.6	101.2	103.5	104.4	102.6	101.4	[illegible]
3.15	90.6	91.8	93.2	94.7	96.4	98.9	101.6	103.3	103.5	101.5	100.7	[illegible]
4.00	90.9	92.1	93.3	95.0	96.9	98.8	101.6	103.1	102.8	100.7	99.4	121.9
5.00	91.1	92.6	93.2	94.9	96.9	98.8	101.5	102.5	102.2	99.9	98.1	121.7
6.30	91.1	92.2	93.1	95.0	96.9	98.9	101.5	102.7	101.5	99.9	97.5	121.3
8.00	89.9	91.6	92.9	94.6	96.9	98.8	101.2	101.9	101.2	100.0	97.2	121.2
10.0	89.6	91.3	92.6	94.5	96.5	98.4	100.7	101.3	100.9	99.4	96.2	[illegible]
12.5	89.4	90.7	92.3	94.1	96.0	98.8	100.1	100.2	99.7	98.0	93.9	120.5
16.0	88.7	90.1	91.5	93.6	95.3	97.5	99.3	99.2	98.5	96.5	91.5	119.1
20.0	87.4	88.8	90.5	92.5	94.2	96.1	97.9	97.4	96.6	94.1	88.6	118.8
25.0	86.2	88.2	89.7	91.7	93.3	94.4	96.4	95.4	94.7	91.0	86.4	117.2
31.5	84.5	86.3	88.4	90.2	91.9	93.3	94.9	93.7	92.3	89.0	83.9	[illegible]
40.0	82.5	84.4	86.6	88.4	90.2	91.5	92.6	91.0	89.7	87.3	81.6	[illegible]
50.0	80.1	81.9	84.0	85.6	87.6	88.0	90.1	88.4	86.0	84.3	80.3	[illegible]
63.0	77.1	78.6	80.9	82.9	84.5	84.0	86.4	85.3	83.4	82.1	80.2	[illegible]
80.0	73.1	74.0	77.5	78.7	81.2	81.6	82.7	81.8	80.2	79.0	79.6	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	103.5	104.5	105.6	107.1	108.0	110.6	113.1	115.1	117.3	119.7	120.1	

OAPWL = [illegible]

b.) Model Data Scaled To Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

```
STAND X206   RIG ID 705367   TEST DATE 11/04/76   SCALE RATIO 7.0/1   RUN NUMBER 20053   CONDITION 5304
          PRIMARY   FAN          PRIMARY   FAN                          PRIMARY   FAN          PRIMARY   FAN
AREA SQFT                  SQM                  MASS FLOW   LB/S   115.2   165.1   KG/S    52.2    75.2
P.R.        2.70    1.70          2.70    1.70  THRUST,IDL  LB                     N
TEMP (R)  1411.0   654.0   (K)   783.9   363.3  THRUST,MEA  LB        0.0          N                0.0
RHO LB/FT3 0.032   0.071  KG/M3  0.520   1.144  AREA (MOD)  SQFT                   SQM
VEL FPS   1547.9  1073.3   M/S   471.8   327.1  W (MODEL)   LB/S    2.4     3.4    KG/S    1.1     1.5
```

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	62.0	63.7	64.9	66.3	67.2	70.5	69.8	72.7	75.3	77.2	77.7
63	65.8	67.5	66.6	69.6	71.0	72.5	73.5	76.0	79.2	81.1	81.0
80	67.7	68.1	69.4	70.6	71.3	73.7	74.1	76.7	81.4	83.3	81.5
100	70.0	69.9	70.8	72.3	72.7	73.9	76.0	78.8	82.2	84.6	80.7
125	68.9	70.6	71.0	72.9	73.7	73.8	75.7	79.6	82.3	84.6	82.3
160	69.2	69.8	71.1	72.5	73.9	75.3	77.3	79.6	82.6	82.6	79.4
200	68.1	70.2	71.6	72.7	74.4	75.2	77.7	80.6	81.3	80.8	77.0
250	67.0	69.9	71.3	72.5	74.0	75.2	77.7	79.6	79.9	78.7	75.5
315	66.9	69.3	70.8	72.4	74.0	75.4	77.7	79.3	79.0	75.8	71.7
400	66.9	69.3	70.9	72.5	74.2	75.5	77.9	79.0	78.2	74.0	68.5
500	67.0	69.0	70.9	72.6	74.1	75.5	78.0	78.5	76.9	72.3	66.7
630	67.1	69.1	70.8	72.6	74.4	75.8	78.0	78.0	75.9	71.0	65.0
800	66.9	68.6	70.3	72.2	74.0	75.4	77.3	77.0	74.7	69.5	62.8
1000	66.4	68.4	69.8	71.8	73.6	75.1	76.8	76.1	73.3	68.6	60.9
1250	64.7	67.5	69.1	71.2	73.1	74.5	76.0	75.7	72.3	67.8	59.7
1600	63.5	66.7	68.1	70.2	72.0	73.3	74.6	73.6	70.8	65.6	55.9
2000	62.4	64.8	67.0	69.0	70.7	72.1	73.1	71.5	68.4	62.6	51.2
2500	60.5	63.1	65.2	67.5	69.0	70.5	71.1	69.1	65.5	58.9	45.5
3150	57.7	60.5	62.9	65.2	66.6	67.8	68.2	65.6	61.5	53.7	38.3
4000	54.5	58.0	60.4	62.7	64.0	64.6	64.7	61.3	56.0	47.6	30.5
5000	52.0	55.5	58.5	60.6	62.0	62.5	62.4	58.6	53.1	43.9	25.1
6300	47.6	51.4	54.7	56.8	58.3	58.5	57.9	53.6	46.9	36.4	15.1
8000	42.3	46.3	49.6	51.6	53.2	53.2	52.3	47.4	39.6	27.4	4.5
10000	32.5	37.6	40.9	43.4	44.5	43.2	41.8	36.0	26.4	12.1	0.6
OASPL	79.5	81.1	82.6	84.2	85.7	87.0	88.9	90.1	91.2	91.6	89.3
PNL	86.5	89.6	90.9	92.9	94.5	95.8	96.9	96.5	95.4	93.5	89.7

400. SIDELINE											
PNL	99.7	101.9	103.7	105.7	107.3	108.7	110.0	109.5	108.0	105.4	101.1

2000. SIDELINE											
PNL	79.3	81.8	83.8	85.7	87.3	88.5	89.8	89.9	89.1	87.4	82.9

4000. SIDELINE											
PNL	69.2	71.7	73.6	75.4	77.0	78.1	79.8	80.2	79.7	77.9	73.2

6600. SIDELINE											
PNL	62.9	65.5	67.3	69.1	70.7	71.8	73.3	73.9	73.7	72.6	67.1

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Basic Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 1A; Condition 5305

a.) Model Data Measured At 15 Ft. Radius

STAND X2?0 RIG ID 765307 TEST DATE 11/04/76 SCALE RATIO 7.0/1 RUN NUMBER 20053 CONDITION 5305

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM	0.0	0.0	MASS FLOW LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		1.00	1.76		1.00	1.76	THRUST,IDL LB			N		
TEMP	(R)	1435.0	660.0	(K)	797.2	371.1	THRUST,MEA LB		0.0	N		0.0
RHO	LB/FT3	0.032	0.070	KG/M3	0.510	1.120	AREA (MOD) SQFT			SQM		
VEL	FPS	1636.4	1083.0	M/S	498.8	330.3	W (MODEL) LB/S	2.6	3.1	KG/S	1.2	1.4

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (MODEL)

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	POWER 1E-12W
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	79.9	81.8	83.4	84.5	84.4	84.8	86.3	88.6	90.5	94.3	99.6	111.4
.125	81.1	84.3	83.4	81.8	85.8	86.7	85.8	88.8	92.8	95.8	99.4	112.0
.160	84.9	86.2	85.0	84.9	84.8	84.6	86.5	88.4	93.6	98.6	101.8	113.5
.200	83.7	83.1	85.2	86.5	87.6	88.1	90.3	92.4	97.8	102.4	105.1	117.8
.250	81.8	85.6	86.1	87.8	88.5	89.4	91.3	94.6	99.6	104.2	106.7	116.8
.315	86.7	86.0	87.7	88.9	90.1	94.3	93.9	97.7	102.3	106.5	110.1	121.5
.400	89.5	90.6	91.7	92.2	93.6	96.3	97.4	101.2	106.1	110.4	110.3	123.4
.500	91.0	91.1	92.6	93.2	94.1	97.6	98.1	102.1	106.5	112.5	113.9	126.7
.630	94.1	93.2	94.6	95.2	95.7	97.4	100.4	104.6	109.9	113.9	113.3	127.6
.800	93.4	94.5	96.2	95.9	97.6	97.5	100.2	104.8	110.4	114.0	115.6	128.0
1.00	94.1	94.2	94.7	95.9	97.4	99.4	102.1	105.7	110.2	113.9	113.7	128.2
1.25	93.2	94.6	95.1	96.5	98.2	99.3	102.5	105.9	109.4	112.2	113.6	128.4
1.60	93.2	94.5	95.2	96.1	97.6	99.3	102.4	105.8	108.1	110.4	111.7	129.3
2.00	92.9	93.0	94.6	96.0	97.5	99.5	102.7	105.8	107.3	107.7	109.1	126.1
2.50	92.1	93.5	94.6	96.1	97.9	99.8	103.1	105.5	106.5	105.8	106.1	129.4
3.15	92.3	93.4	94.7	96.2	98.0	100.1	103.1	105.1	105.5	104.5	104.9	125.9
4.00	92.4	93.5	94.7	96.4	98.3	100.4	103.5	104.9	104.7	103.5	103.4	123.8
5.00	92.5	93.3	94.6	96.2	98.2	100.1	103.1	104.2	103.9	102.5	101.6	123.0
6.30	92.4	93.4	94.4	96.2	98.2	100.4	103.0	103.9	103.4	102.3	100.4	122.8
8.00	91.3	93.1	94.3	96.3	98.2	100.5	102.9	103.5	103.2	102.3	99.4	127.7
10.0	90.8	92.7	94.6	95.8	96.8	100.1	102.4	103.1	103.0	101.4	98.3	[illegible]
12.5	91.0	92.2	93.9	95.8	97.6	99.9	102.6	102.3	102.6	100.2	96.3	121.6
16.0	90.2	91.6	93.2	95.2	97.1	99.3	101.3	101.4	101.6	98.7	94.3	120.8
20.0	88.6	90.5	92.2	94.1	96.6	98.2	99.9	99.8	99.4	96.5	91.6	119.4
25.0	87.0	89.0	91.4	93.5	95.2	97.0	98.6	97.8	97.9	94.6	89.5	118.1
31.5	86.1	88.6	90.2	92.2	94.6	95.5	97.1	96.2	95.3	92.7	87.7	116.9
40.0	84.2	86.9	88.5	90.5	92.2	93.8	95.4	94.2	93.6	90.6	85.6	114.6
50.0	81.7	83.6	85.4	87.5	89.7	91.1	92.5	91.3	90.1	87.6	83.6	111.1
63.0	78.6	80.4	82.8	84.6	86.7	87.5	88.9	88.1	86.7	84.2	80.7	109.8
80.0	74.6	76.8	79.4	80.8	83.5	84.3	85.4	84.5	83.4	82.5	83.5	105.3
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LSPL	105.2	106.2	107.2	108.7	110.4	112.4	114.9	117.6	119.6	122.3	123.3	OAPWL = 136.1

b.) Model Data Scaled To Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X2?6 RIG ID 765307 TEST DATE 11/04/76 SCALE RATIO 7.0/1 RUN NUMBER 20053 CONDITION 5305

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT	2.65	1.96	SQM	0.220	0.187	MASS FLOW LB/S	170.4	154.3	KG/S	58.2	70.0
P.R.		1.00	1.74		1.00	1.74	THRUST,IDL LB			N		
TEMP	(R)	1435.0	660.0	(K)	797.2	371.1	THRUST,MEA LB		0.0	N		0.0
RHO	LB/FT3	0.032	0.070	KG/M3	0.510	1.120	AREA (MOD) SQFT			SQM		
VEL	FPS	1636.4	1083.0	M/S	498.8	330.3	W (MODEL) LB/S	2.6	3.1	KG/S	1.2	1.4

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	64.2	65.0	66.3	67.6	68.7	72.5	71.4	74.1	77.1	79.1	79.3
63	67.0	68.0	69.8	70.9	72.2	74.5	74.9	77.6	80.9	83.0	83.5
80	69.3	69.3	70.6	71.9	72.7	75.2	75.6	78.5	83.3	85.1	83.1
100	71.9	71.5	72.5	73.8	74.2	75.5	77.7	80.8	84.5	86.3	82.1
125	70.7	72.6	72.7	74.5	75.5	75.6	77.5	81.0	85.0	87.2	84.4
160	71.3	72.1	73.1	74.4	74.8	77.3	79.3	81.0	84.7	86.6	82.7
200	70.4	71.5	73.9	75.0	76.6	77.2	79.7	82.6	83.9	84.3	81.5
250	70.3	72.1	73.5	74.5	75.9	77.1	79.5	81.7	82.4	82.3	79.9
315	69.2	71.2	72.6	74.2	75.5	77.1	79.5	81.4	81.2	79.1	76.6
400	68.4	71.6	72.5	74.2	75.8	77.3	79.8	81.6	80.3	77.6	73.2
500	68.7	70.6	72.4	74.1	75.7	77.3	79.7	80.3	78.9	75.3	71.4
630	68.4	70.5	72.2	74.0	75.0	77.4	79.7	79.8	77.8	73.8	69.2
800	68.3	69.9	71.7	73.5	75.3	76.9	78.9	78.7	76.4	72.1	66.3
1000	67.7	69.6	71.1	73.0	74.9	76.6	78.3	77.8	75.2	71.6	63.8
1250	66.1	68.0	70.5	72.7	74.4	76.2	77.7	76.8	74.3	70.1	61.4
1600	64.7	67.0	69.5	71.5	73.5	75.6	76.3	75.4	72.9	67.6	58.6
2000	64.6	66.3	68.6	70.5	72.3	74.8	75.0	73.6	70.7	64.0	53.6
2500	62.6	64.6	66.9	69.1	70.8	72.3	73.1	71.3	68.0	61.1	48.3
3150	59.1	62.2	64.6	66.8	68.4	69.9	70.2	68.0	64.3	56.1	41.3
4000	56.1	59.6	62.1	64.5	65.4	66.8	66.9	65.7	60.6	50.4	33.6
5000	53.6	57.2	60.3	62.6	64.1	64.7	64.6	61.0	56.1	46.8	26.4
6300	49.3	53.4	56.6	58.9	60.3	60.8	60.5	56.2	56.2	39.7	18.5
8000	43.9	48.6	51.5	53.5	55.3	55.5	54.7	49.9	42.9	30.7	0.0
10000	34.6	38.8	42.8	45.3	46.7	45.7	44.3	36.8	29.7	15.7	0.0
OASPL	81.2	82.9	84.2	85.8	87.3	88.8	90.6	92.0	93.5	94.2	91.6
PNL	88.2	90.6	92.6	94.6	96.2	97.6	98.9	98.5	97.8	96.2	92.0
400. SIDELINE PNL	101.3	103.5	105.4	107.4	109.6	110.4	111.9	111.5	110.4	108.7	104.0
2000. SIDELINE PNL	81.0	83.4	85.5	87.4	89.0	90.4	91.6	91.9	91.6	90.1	85.9
4000. SIDELINE PNL	71.1	73.5	75.3	77.1	78.7	80.0	81.7	82.2	82.3	81.0	76.3
6000. SIDELINE PNL	64.8	67.3	69.1	70.9	72.4	73.7	75.3	76.0	76.3	75.0	70.1

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Basic Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 1A; Condition 5306

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG 10 705307 TEST DATE 11/04/76 SCALE RATIO 7.0/1 RUN NUMBER [illegible] CONDITION 5306

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		1.66	1.79		1.66	1.79	THRUST,IDL	LB					
TEMP	(R)	1463.6	677.6	(K)	817.0	376.1	THRUST,MEA	LB		0.0	N		0.0
RHO	LB/FT3	0.032	0.069	KG/M3	0.513	1.113	AREA (MOD)	SQFT			SQM		
VEL	FPS	1695.7	1116.2	M/S	516.8	340.2	W (MODEL)	LB/S	2.7	3.2	KG/S	1.2	1.5

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (MODEL)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PWL DB-1/W
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	80.0	82.9	84.3	84.9	85.2	85.5	87.0	89.6	91.4	95.5	100.5	112.1
.125	81.9	85.3	84.3	86.7	86.6	87.4	88.0	89.0	93.7	96.9	100.1	[illegible]
.160	85.9	87.1	85.0	85.9	85.1	85.5	87.2	89.1	94.3	98.0	102.9	114.3
.200	84.4	83.9	85.4	87.5	88.2	89.0	91.3	93.1	98.0	103.5	105.0	116.0
.250	84.4	85.0	88.4	88.6	89.5	90.4	92.3	95.5	100.3	105.3	107.9	119.0
.315	87.5	87.4	88.5	89.0	90.9	93.3	94.0	98.0	103.0	107.6	111.2	[illegible]
.400	90.2	91.3	91.5	92.8	94.4	97.1	98.2	102.1	107.1	111.5	115.2	126.4
.500	92.5	92.1	93.6	94.1	95.0	96.0	98.9	103.0	109.5	113.7	115.0	[illegible]
.630	93.8	94.1	94.0	96.2	96.5	98.4	101.1	105.7	111.1	115.3	116.2	[illegible]
.800	94.9	95.3	95.1	97.1	98.0	98.4	101.7	106.2	111.9	116.3	116.7	130.1
1.00	95.1	95.3	95.7	96.9	98.4	100.6	103.2	106.9	[illegible]	[illegible]	[illegible]	[illegible]
1.25	94.7	96.0	96.6	97.0	99.3	100.0	103.7	107.2	111.6	114.5	116.0	129.2
1.60	95.2	96.1	96.1	97.5	99.0	100.5	103.7	106.9	109.5	112.0	116.1	131.1
2.00	94.1	95.0	95.9	97.2	98.7	100.0	103.9	106.9	108.7	110.2	112.6	[illegible]
2.50	93.5	94.8	95.7	97.2	99.6	100.8	104.1	106.6	107.8	108.3	109.4	[illegible]
3.15	93.0	94.5	95.0	97.3	98.9	101.1	104.4	106.3	106.8	106.7	107.0	[illegible]
4.00	93.4	94.0	95.7	97.4	99.3	101.3	104.8	106.2	106.6	105.7	106.6	[illegible]
5.00	93.5	94.6	95.6	97.2	99.2	103.3	104.3	105.2	105.3	104.0	103.9	[illegible]
6.30	93.4	94.4	95.4	97.1	99.1	101.3	104.1	104.9	104.6	104.2	102.4	[illegible]
8.00	92.4	94.1	95.1	97.6	99.2	101.4	103.9	104.7	104.3	103.0	101.2	[illegible]
10.0	91.4	93.6	95.6	96.9	96.9	101.2	103.9	104.1	104.0	102.9	99.7	[illegible]
12.5	91.4	93.6	94.6	96.0	98.6	100.7	103.1	103.6	103.1	101.6	97.0	[illegible]
16.0	91.1	92.6	94.2	96.1	98.6	100.4	102.3	102.7	102.3	100.2	95.7	[illegible]
20.0	89.6	91.5	93.1	95.1	96.8	99.2	100.9	101.1	100.6	98.1	93.1	[illegible]
25.0	88.8	90.0	92.5	94.4	96.2	97.9	99.7	99.2	99.2	96.1	91.0	[illegible]
31.5	86.9	89.1	91.3	93.1	94.8	96.5	96.2	97.6	96.0	94.3	88.6	[illegible]
40.0	85.1	87.1	89.7	91.5	93.3	94.9	96.5	95.6	94.6	92.2	88.2	[illegible]
50.0	82.0	84.5	88.9	88.4	90.9	92.2	93.7	92.8	91.7	89.4	84.0	[illegible]
63.0	79.6	81.5	83.9	85.9	87.3	88.4	90.2	89.6	88.5	86.9	84.6	[illegible]
80.0	75.6	77.7	86.5	81.8	84.2	85.3	86.6	86.1	85.3	84.6	83.0	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	106.3	107.3	108.3	109.0	111.4	113.4	116.6	118.7	120.9	124.0	124.7	OAPWL = [illegible]

b.) Model Data Scaled To Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG 10 705307 TEST DATE 11/04/76 SCALE RATIO 7.0/1 RUN NUMBER [illegible] CONDITION 5306

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	[illegible]	[illegible]	KG/S	[illegible]	[illegible]
P.R.		1.66	1.79		1.66	1.79	THRUST,IDL	LB					
TEMP	(R)	1463.6	677.0	(K)	812.0	376.1	THRUST,MEA	LB		0.0	N		0.0
RHO	LB/FT3	0.032	0.069	KG/M3	0.513	1.113	AREA (MOD)	SQFT			SQM		
VEL	FPS	1695.7	1116.2	M/S	516.8	340.2	W (MODEL)	LB/S	2.7	3.2	KG/S	1.2	1.5

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	65.6	65.6	67.1	68.5	69.5	73.5	72.3	75.0	77.0	80.2	80.4
63	67.7	69.5	70.5	72.5	73.0	75.3	75.7	78.5	81.9	84.8	84.4
80	70.0	70.3	71.6	72.0	73.6	76.2	76.4	79.4	84.3	86.3	84.2
100	72.4	72.2	73.3	74.8	75.6	76.3	78.6	81.9	85.7	87.7	83.8
125	71.7	73.4	73.6	75.7	76.5	76.5	78.5	82.4	86.5	88.7	85.5
160	72.3	73.2	74.1	75.4	76.8	78.3	80.4	83.6	86.3	87.7	83.9
200	71.9	73.9	75.2	76.3	77.7	78.5	80.9	83.3	85.5	86.6	83.3
250	72.3	73.9	75.6	75.9	77.3	78.3	80.8	82.8	83.8	84.7	82.3
315	70.9	72.6	73.9	[illegible]	76.7	78.2	80.7	82.5	82.6	81.6	79.5
400	70.2	72.3	73.6	[illegible]	76.9	78.3	80.0	82.1	81.6	79.5	76.5
500	70.6	71.7	73.5	75.2	76.6	78.3	80.8	81.5	80.2	77.5	74.4
630	69.6	71.0	73.2	75.0	76.8	78.3	80.0	81.1	79.1	76.6	71.0
800	69.3	71.6	72.7	74.5	76.3	77.9	79.9	79.7	77.6	74.2	68.0
1000	68.7	70.6	72.1	73.9	75.8	77.5	79.4	78.8	76.4	72.9	65.8
1250	67.2	69.0	71.5	73.4	75.4	77.1	78.7	78.0	75.4	71.6	63.2
1600	65.0	68.5	70.5	72.6	74.4	76.1	77.4	76.4	73.9	69.1	59.4
2000	64.9	67.1	69.5	71.5	73.3	74.8	76.1	74.9	71.8	66.7	55.1
2500	62.9	65.0	67.9	70.0	71.7	73.4	74.1	72.6	69.3	62.6	49.7
3150	59.9	63.2	65.5	67.8	69.2	70.9	71.2	69.3	65.5	57.7	42.0
4000	56.9	60.6	63.2	65.4	66.9	67.7	68.0	65.1	61.3	51.9	35.1
5000	54.4	58.3	61.4	63.5	64.9	65.7	65.7	62.3	57.6	48.4	29.8
6300	50.2	54.1	57.8	59.9	61.4	61.9	61.6	57.0	51.8	41.3	19.7
8000	46.8	48.9	52.5	56.4	56.3	56.6	55.9	51.4	46.5	32.5	9.0
10000	35.0	39.9	43.9	46.4	47.7	48.0	45.0	40.3	33.5	16.9	0.0
OASPL	82.4	84.6	85.3	86.9	88.3	89.0	91.7	93.2	94.8	95.9	92.1
PNL	89.3	91.8	93.7	95.6	97.2	98.7	99.9	99.7	99.2	98.2	93.9
400. SIDELINE PNL	102.3	104.6	106.5	108.3	110.6	111.8	113.6	112.8	111.7	110.1	105.9
2000. SIDELINE PNL	82.1	84.5	86.5	88.4	90.0	91.4	92.7	93.1	93.0	92.1	87.7
4000. SIDELINE PNL	72.4	74.7	76.4	78.2	79.7	81.6	82.6	83.4	83.8	83.2	78.2
6000. SIDELINE PNL	66.3	68.5	70.2	72.0	73.5	74.7	76.4	77.2	77.9	77.3	71.9

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Basic Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 1A; Condition 5308

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 705307 TEST DATE 11/04/76 SCALE RATIO 7.0/1 RUN NUMBER [illegible] CONDITION 5308

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		2.00	1.96		2.00	1.96
TEMP	(R)	1570.0	690.0	(K)	872.2	383.3
RHO	LB/FT3	0.031	0.070	KG/M3	0.490	1.120
VEL	FPS	1890.0	1205.1	M/S	576.1	367.3

		PRIMARY	FAN		PRIMARY	FAN
MASS FLOW	LB/S	0.0	0.0	KG/S	0.0	0.0
THRUST,IDL	LB			N		
THRUST,MEA	LB		0.0	N		0.0
AREA (NOZ)	SQFT			SQM		
W (NOZ)	LB/S	3.0	3.0	KG/S	1.4	1.4

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS RAW CORRECTED SPL - (NOGAL)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	POWER 1E-12W
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	83.3	86.0	86.5	87.5	87.5	88.1	89.6	91.6	93.5	97.1	102.2	114.1
.125	84.1	87.1	86.2	87.3	89.0	89.7	89.1	92.1	96.1	99.1	102.5	115.3
.160	88.7	89.6	88.2	88.3	87.9	87.9	88.8	91.5	96.8	101.3	105.4	116.9
.200	86.6	86.7	87.9	89.5	91.6	91.3	93.4	95.4	100.9	105.6	108.4	120.3
.250	86.8	87.8	88.9	91.6	92.6	92.8	90.4	97.3	102.9	107.5	110.3	122.1
.315	89.5	89.0	90.5	92.2	93.5	98.0	97.3	101.1	105.7	109.9	113.0	125.6
.400	92.8	93.4	94.1	95.1	97.1	99.1	100.9	104.8	109.9	114.0	117.4	129.0
.500	93.1	94.2	95.1	96.4	97.5	101.0	101.6	105.7	112.5	116.6	117.5	130.0
.630	97.3	96.2	97.1	98.8	99.3	104.9	104.1	108.7	114.4	118.0	118.1	131.9
.800	96.7	97.7	97.6	99.9	100.8	101.1	103.9	109.4	115.7	119.4	119.3	[illegible]
1.00	97.6	98.1	98.5	100.1	101.7	103.7	106.4	110.6	118.4	119.5	118.5	131.6
1.25	97.9	99.1	100.1	101.3	102.9	104.1	107.2	110.8	118.1	119.3	118.3	133.0
1.60	98.9	100.0	100.4	101.3	102.7	104.3	107.3	110.8	114.7	118.9	119.1	133.0
2.00	98.4	99.0	99.0	101.0	102.5	104.0	107.5	110.8	113.5	117.2	118.0	132.8
2.50	97.0	98.6	99.1	100.8	102.6	104.3	107.0	110.3	112.4	115.7	116.0	131.1
3.15	97.4	98.0	98.9	100.6	102.3	104.4	107.0	109.9	111.3	[illegible]	114.9	130.1
4.00	96.0	97.7	98.7	100.6	102.6	104.7	108.0	109.6	110.5	112.9	117.3	129.6
5.00	96.4	97.2	98.2	100.2	102.3	104.5	107.7	108.8	109.7	111.3	109.7	128.5
6.30	96.1	97.1	[illegible]	100.1	102.2	104.5	107.5	106.4	109.1	110.1	107.6	[illegible]
8.00	95.6	96.0	98.0	100.1	102.3	104.7	107.4	108.1	108.7	108.0	106.3	127.5
10.0	94.6	96.7	97.7	99.0	102.0	104.4	107.1	107.7	108.2	107.5	104.7	[illegible]
12.5	94.4	95.8	97.7	99.7	101.7	104.3	106.7	107.2	107.2	106.7	102.9	[illegible]
16.0	93.7	95.3	97.6	99.3	101.6	103.9	105.9	106.7	106.2	104.9	101.1	125.2
20.0	92.7	94.2	96.0	98.4	100.2	102.6	104.5	105.3	104.5	102.0	98.7	124.2
25.0	91.3	93.6	95.4	97.6	99.7	101.5	103.6	103.5	103.5	101.2	96.6	123.1
31.5	89.5	91.0	94.2	96.5	98.3	100.2	102.2	102.6	101.4	99.6	94.5	121.6
40.0	87.7	90.0	92.6	94.9	96.9	98.6	100.4	100.2	99.4	97.7	92.1	[illegible]
50.0	85.4	87.5	90.2	92.1	94.5	96.2	97.9	97.7	96.9	95.1	[illegible]	117.4
63.0	82.5	84.5	87.1	89.4	91.5	92.5	94.7	94.0	93.9	92.6	89.0	114.3
80.0	78.0	84.0	83.0	83.4	86.2	89.7	91.2	91.2	91.2	90.2	88.0	111.1
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	109.3	110.2	111.2	112.9	114.7	116.7	119.4	121.7	125.2	128.3	120.5	

OAPWL = [illegible]

b.) Model Data Scaled To Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 705307 TEST DATE 11/04/76 SCALE RATIO 7.0/1 RUN NUMBER [illegible] CONDITION 5308

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	67.0	68.0	69.1	70.0	72.1	76.2	74.6	77.5	80.5	82.3	83.6
63	70.3	71.6	72.7	73.8	75.7	77.5	78.4	81.7	84.7	86.6	87.1
80	72.0	72.4	73.7	75.1	76.1	79.2	79.1	82.1	87.3	89.2	86.7
100	74.0	74.3	75.0	77.4	77.8	79.0	81.4	84.9	89.0	90.4	85.5
125	74.0	75.0	76.1	78.5	79.3	79.2	81.2	85.6	90.3	91.8	88.1
160	74.6	76.6	76.9	78.3	80.1	81.6	83.6	86.7	90.9	91.6	87.6
200	75.1	77.0	78.5	79.6	81.3	82.0	84.4	86.9	90.0	91.4	87.2
250	76.6	77.0	78.7	79.7	81.6	82.1	84.4	86.5	89.6	90.8	87.3
315	75.2	76.0	77.6	79.2	80.5	81.6	84.3	86.2	87.4	88.6	85.5
400	74.3	75.9	77.0	78.9	80.5	83.0	84.5	85.8	86.2	86.9	83.1
500	73.8	75.2	76.0	78.5	80.0	83.0	84.2	85.1	84.7	85.0	80.9
630	73.6	74.7	76.2	76.2	79.9	81.7	84.2	84.5	83.6	83.2	78.1
800	72.2	73.0	75.3	77.5	79.4	81.1	83.5	83.3	82.2	80.9	74.4
1000	71.4	73.3	74.9	76.9	78.9	80.7	82.0	82.3	80.9	78.0	71.7
1250	69.8	72.5	74.2	76.5	78.5	80.4	82.2	81.4	79.6	76.6	68.3
1600	68.3	71.2	73.2	75.5	77.5	79.3	81.0	80.0	78.1	73.7	64.4
2000	67.4	69.9	72.4	74.6	76.4	78.4	79.7	78.5	75.9	70.8	60.2
2500	65.3	68.3	70.7	73.2	75.1	76.9	77.7	76.6	73.2	67.3	55.1
3150	62.5	65.9	68.4	71.1	72.0	74.3	74.0	73.3	69.4	62.4	48.4
4000	59.6	63.4	66.1	68.6	70.4	71.3	71.9	69.4	65.0	57.0	40.9
5000	57.0	61.0	64.3	66.9	68.4	69.4	69.7	66.9	62.2	53.7	35.6
6300	52.0	57.0	60.7	63.3	65.0	65.6	65.3	62.2	56.6	46.8	25.6
8000	47.6	51.9	55.6	58.1	60.1	60.6	60.1	56.3	49.7	38.2	14.7
10000	37.9	42.9	47.1	49.9	51.5	56.9	50.1	45.3	36.9	27.6	0.0
OASPL	85.5	87.6	88.3	90.1	91.6	93.6	95.1	96.6	99.0	100.1	96.6
PNL	92.2	94.6	96.6	98.6	100.6	102.1	103.5	103.4	104.8	104.4	98.6

	600. SIDELINE										
PNL	105.2	107.4	109.4	111.6	113.3	115.6	116.5	116.6	115.9	115.3	110.7
	2000. SIDELINE										
PNL	85.5	87.6	89.5	91.7	93.3	94.9	96.3	96.8	97.6	97.3	92.4
	4000. SIDELINE										
PNL	75.9	78.1	79.6	81.6	83.2	84.5	86.4	87.1	88.6	88.3	82.8
	6000. SIDELINE										
PNL	69.9	72.1	73.9	75.4	77.0	78.2	80.3	81.0	82.9	82.5	76.3

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Basic Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 1A; Condition 5309

a.) Model Data Measured At 15 Ft. Radius

STAND A206 RIG ID 765367 TEST DATE 11/03/76 SCALE RATIO 7.6/1 RUN NUMBER [illegible] CONDITION 5309

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S	0.0	0.0 KG/S		0.0	0.0
P.R.		2.13	1.99		2.13	1.99	THRUST,IDL LB			N		
TEMP	(R)	1667.0	701.0	(K)	892.0	389.4	THRUST,MEA LB		0.0	N		0.0
RHO	LB/FT3	0.030	0.069	KG/M3	0.482	1.108	AREA (MOD) SQFT			SQM		
VEL	FPS	1951.4	1229.0	M/S	594.8	374.6	W (MODEL) LB/S	1.1	3.4 KG/S		1.1	1.0

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (MODEL)

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	POWER [illegible]
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	83.8	85.7	87.2	88.0	88.0	88.6	90.1	92.4	94.2	98.1	103.1	[illegible]
.125	86.9	87.6	86.8	88.0	89.0	90.5	89.5	92.9	96.7	99.9	103.2	[illegible]
.160	89.5	90.1	88.7	89.0	88.2	88.7	90.4	92.2	97.7	102.2	105.9	[illegible]
.200	87.3	86.7	87.7	90.2	91.5	91.0	94.2	95.8	101.6	106.0	108.9	[illegible]
.250	87.6	88.5	89.8	91.7	92.6	93.5	95.1	98.4	103.6	108.2	111.2	[illegible]
.315	90.1	90.3	91.4	92.0	94.1	99.0	98.0	101.9	106.5	110.9	114.5	[illegible]
.400	93.0	93.9	94.4	95.7	97.6	100.4	101.4	105.4	110.7	114.7	118.4	[illegible]
.500	95.0	96.0	95.0	97.1	97.9	102.6	102.2	106.5	113.4	117.2	118.0	[illegible]
.630	97.7	96.0	97.7	99.2	99.6	101.6	104.6	109.6	113.3	118.0	117.2	[illegible]
.800	97.6	98.2	98.3	100.3	101.6	101.8	104.6	110.0	116.0	120.2	119.7	[illegible]
1.00	98.4	98.0	99.1	100.7	102.4	104.5	107.1	111.6	117.6	120.4	118.0	[illegible]
1.25	98.7	100.0	100.9	101.9	103.7	104.7	107.9	111.9	117.7	120.3	119.3	[illegible]
1.60	100.1	101.0	101.2	102.1	103.5	105.1	108.6	111.5	116.5	120.4	119.9	[illegible]
2.00	99.5	99.9	100.8	102.6	103.6	104.9	108.3	111.6	115.3	119.1	119.2	[illegible]
2.50	98.0	99.3	100.1	101.7	103.5	105.3	108.6	111.3	114.1	117.6	117.1	[illegible]
3.15	98.4	99.0	99.8	101.4	103.1	105.3	108.0	111.6	112.9	116.1	115.5	[illegible]
4.00	97.7	98.7	99.5	101.3	103.3	105.0	108.9	110.7	112.2	114.0	113.3	[illegible]
5.00	97.4	98.2	99.1	101.1	103.3	105.5	108.3	109.9	111.3	113.6	110.8	[illegible]
6.30	97.2	98.1	98.9	101.1	103.1	105.4	108.4	109.5	110.5	111.7	108.9	[illegible]
8.00	96.1	97.7	98.9	101.1	103.1	105.5	108.1	109.1	110.1	110.2	107.3	[illegible]
10.0	95.4	97.1	98.0	100.0	102.9	105.3	107.0	108.5	109.4	108.7	105.6	[illegible]
12.5	96.9	96.6	98.1	100.5	102.4	104.9	107.2	107.9	108.1	107.4	104.0	[illegible]
16.0	94.1	95.6	97.3	99.9	101.6	104.6	106.6	107.3	107.0	106.0	102.2	[illegible]
20.0	92.5	94.5	96.3	98.0	100.6	103.1	105.1	105.0	105.5	104.1	99.8	[illegible]
25.0	91.4	93.0	95.4	98.0	99.9	101.9	103.9	104.0	104.0	102.4	97.9	[illegible]
31.5	89.7	91.9	94.3	96.0	98.6	100.5	102.5	102.5	102.0	100.8	95.9	[illegible]
40.0	87.7	89.9	92.5	95.0	96.8	98.8	100.6	100.6	99.9	98.8	93.6	[illegible]
50.0	85.3	87.6	89.9	92.2	94.6	96.2	98.0	98.1	97.	96.5	92.0	[illegible]
63.0	82.4	84.2	87.0	89.5	91.4	92.7	96.0	95.1	94.9	94.3	91.6	[illegible]
80.0	78.9	80.7	83.6	85.6	88.3	89.6	91.6	92.0	92.1	91.8	90.2	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

CAPWL = [illegible]

OASPL	110.[illegible]	111.0	111.9	113.7	115.5	117.6	120.1	122.0	126.5	129.5	129.1

b.) Model Data Scaled To Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND A206 RIG ID 765367 TEST DATE 11/03/76 SCALE RATIO 7.6/1 RUN NUMBER [illegible] CONDITION 5309

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S	150.[illegible]	[illegible] KG/S		[illegible]	[illegible]
P.R.		2.13	1.99		2.13	1.99	THRUST,IDL LB			N		
TEMP	(R)	1667.0	701.0	(K)	892.0	389.4	THRUST,MEA LB		0.0	N		0.0
RHO	LB/FT3	0.030	0.069	KG/M3	0.482	1.108	AREA (MOD) SQFT			SQM		
VEL	FPS	1951.4	1229.0	M/S	594.8	374.6	W (MODEL) LB/S	1.1	3.4 KG/S		1.1	1.0

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	67.0	68.5	70.0	71.5	72.7	77.2	75.5	78.3	81.3	83.5	85.7
63	71.1	72.1	73.0	74.6	76.2	76.6	78.9	81.8	85.5	87.3	87.6
80	73.3	77.0	74.2	75.8	76.5	80.2	79.7	82.9	88.2	89.8	87.2
100	75.0	74.7	76.2	77.8	78.1	79.7	81.9	85.6	89.9	91.7	86.0
125	74.7	76.3	76.8	78.9	79.9	79.9	81.9	86.8	91.4	92.6	88.5
160	75.6	76.7	77.5	79.2	80.0	82.2	84.3	87.7	92.1	92.5	87.3
200	75.9	77.9	79.3	80.4	87.1	87.6	83.8	88.6	92.2	92.4	87.8
250	77.2	78.8	79.2	80.5	81.0	82.9	83.1	87.4	90.8	92.3	88.1
315	76.2	77.5	78.8	80.7	81.4	82.5	85.1	87.2	89.2	90.5	86.7
400	75.3	77.6	78.0	79.8	81.4	82.0	85.2	86.6	87.9	88.8	84.2
500	74.0	76.2	77.5	79.3	80.8	82.5	85.2	86.2	86.3	86.9	82.6
630	73.9	75.7	77.0	78.9	80.8	82.6	85.1	85.6	85.3	85.1	79.1
800	73.2	74.8	76.2	78.4	80.4	82.1	84.1	84.6	83.8	82.6	75.5
1000	72.5	74.3	75.6	77.9	79.8	81.6	83.7	83.4	82.3	80.4	72.3
1250	70.9	73.5	75.1	77.5	79.3	81.7	82.9	82.4	81.2	78.8	69.3
1600	69.3	72.6	74.1	76.5	78.4	80.2	82.7	80.6	79.2	74.9	65.2
2000	67.9	70.5	72.8	75.4	77.1	79.0	80.2	79.2	76.8	72.0	61.3
2500	65.9	68.0	71.0	73.8	75.5	77.4	78.4	77.2	74.0	68.9	56.2
3150	64.6	66.2	68.7	71.5	73.6	74.0	75.4	74.6	70.4	63.7	49.5
4000	59.7	63.4	66.1	69.6	70.6	71.7	72.2	69.9	66.1	58.2	42.6
5000	57.2	61.1	64.4	67.2	68.7	69.7	70.0	67.4	62.0	54.9	37.1
6300	52.0	56.9	60.6	63.4	64.9	65.8	65.7	62.6	57.1	47.9	26.9
8000	47.5	51.0	55.5	58.2	60.0	60.6	60.2	56.7	50.5	39.6	16.2
10000	37.8	42.6	47.0	50.0	51.4	51.1	50.2	45.0	37.9	24.3	0.0
OASPL	84.4	87.0	89.1	90.8	92.3	93.9	95.0	97.4	100.4	101.2	97.2
PNL	92.9	95.2	97.1	99.5	101.1	102.0	104.2	104.2	105.2	104.8	99.5

400. SIDELINE

PNL	105.6	108.0	109.0	112.2	113.9	115.7	117.2	117.4	117.1	116.7	111.6

2000. SIDELINE

PNL	86.4	88.5	90.1	92.4	94.0	95.6	97.6	97.8	99.6	98.7	93.2

4000. SIDELINE

PNL	76.9	79.0	80.5	82.5	84.0	85.4	87.1	88.1	90.1	89.6	83.6

8000. SIDELINE

PNL	70.9	73.0	74.4	76.3	77.8	79.1	80.[illegible]	82.1	84.4	83.0	77.0

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Basic Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 1A; Condition 5310

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 705307 TEST DATE 11/04/76 SCALE RATIO 7.071 RUN NUMBER 20053 CONDITION 5310

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		2.15	2.01		2.15	2.01	THRUST,IDL LB			N		
TEMP	(R)	1617.0	711.0	(K)	898.3	395.0	THRUST,IDEA LB	0.0		N	0.0	
RHO	LB/FT3	0.030	0.068	KG/M3	0.480	1.096	AREA (MOD) SQFT			SQM		
VEL	FPS	1966.4	1242.6	M/S	599.4	378.7	W (MODEL) LB/S	3.1	3.4	KG/S	1.4	1.6

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS RAW CORRECTED SPL - (NEAR)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	POWER 10-12W
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	84.4	85.8	87.4	88.1	88.4	88.9	90.2	92.3	94.3	98.1	103.1	110.9
.125	85.0	88.1	87.1	88.2	90.2	90.6	89.7	92.5	96.7	99.7	103.2	115.9
.160	89.8	90.0	89.1	89.2	88.5	88.8	90.5	92.6	97.5	102.0	106.1	117.6
.200	87.0	87.1	88.9	90.8	91.9	92.2	94.4	96.2	102.6	106.7	109.4	121.3
.250	87.9	88.7	89.8	91.8	92.7	93.8	95.3	98.2	103.8	108.5	111.3	123.1
.315	90.3	90.4	91.6	93.6	94.4	100.0	98.0	101.4	106.7	111.0	114.7	126.1
.400	94.2	94.1	94.6	96.0	97.0	100.9	101.6	105.6	110.9	114.9	118.7	129.9
.500	95.9	95.2	96.0	97.2	98.3	102.5	102.6	106.6	111.7	117.7	118.2	131.6
.630	98.1	97.6	97.9	99.8	100.2	101.7	104.8	109.8	115.8	119.1	117.5	133.6
.800	97.7	98.4	98.5	100.6	101.7	102.0	104.8	110.7	117.0	120.4	119.8	134.3
1.00	98.7	99.1	99.4	100.9	102.8	104.6	107.3	111.8	117.9	120.6	119.3	134.8
1.25	98.9	100.3	101.6	102.1	104.0	104.9	108.2	111.9	118.3	120.6	119.6	135.6
1.60	100.7	101.3	101.5	102.3	103.8	105.4	108.3	111.9	116.9	120.7	120.2	134.0
2.00	99.8	100.3	100.8	102.3	103.7	105.3	108.6	111.9	115.7	119.6	119.5	134.6
2.50	98.9	99.7	100.3	101.9	103.8	105.4	108.9	111.6	114.6	118.3	117.5	133.6
3.15	98.7	99.2	100.0	101.7	103.4	105.6	109.1	111.1	113.4	116.8	115.9	132.6
4.00	98.1	98.9	99.7	101.6	103.6	105.8	109.2	110.9	117.6	115.4	113.7	131.1
5.00	98.0	98.5	99.4	101.2	103.4	105.7	108.7	110.0	111.8	115.6	111.1	130.1
6.30	98.0	98.5	99.2	101.1	103.4	105.7	108.7	109.7	111.1	112.2	109.3	129.3
8.00	96.7	98.4	99.4	101.1	103.5	105.9	108.4	109.3	110.6	110.0	107.7	128.9
10.0	95.6	97.5	99.0	101.1	103.2	105.6	108.1	108.8	109.8	109.3	106.2	126.3
12.5	95.4	96.9	98.5	100.6	102.9	105.2	107.5	108.1	108.7	108.6	104.5	127.3
16.0	94.5	96.3	97.7	100.6	102.3	104.7	106.8	107.6	107.5	106.6	102.6	126.7
20.0	92.4	94.9	96.6	99.0	101.1	103.5	105.5	106.0	106.0	104.7	100.6	125.3
25.0	91.7	94.3	96.0	98.2	100.4	102.3	104.2	104.3	104.7	103.0	98.6	124.6
31.5	90.2	92.4	94.7	97.0	99.2	101.1	102.9	102.0	102.6	101.5	96.6	122.6
40.0	88.3	90.6	92.9	95.2	97.4	99.4	101.1	101.0	100.6	99.6	94.2	120.7
50.0	85.8	88.1	90.4	92.5	95.0	96.8	98.6	98.5	98.3	97.3	92.6	118.2
63.0	82.9	84.8	87.4	89.9	92.0	93.8	95.9	95.5	95.6	95.2	91.9	115.3
80.0	79.4	81.2	84.0	85.8	88.0	90.6	92.2	92.4	92.8	92.7	90.6	112.3
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	110.5	111.3	112.2	113.9	115.7	117.8	120.4	122.8	126.9	129.9	129.4	

OAPWL = 144.6

b.) Model Data Scaled To Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 705307 TEST DATE 11/04/76 SCALE RATIO 7.071 RUN NUMBER 20053 CONDITION 5310

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S	152.4	167.6	KG/S	69.1	76.0
P.R.		2.15	2.01		2.15	2.01	THRUST,IDL LB			N		
TEMP	(R)	1617.0	711.0	(K)	898.3	395.0	THRUST,IDEA LB	0.0		N	0.0	
RHO	LB/FT3	0.030	0.068	KG/M3	0.480	1.096	AREA (MOD) SQFT			SQM		
VEL	FPS	1966.4	1242.6	M/S	599.4	378.7	W (MODEL) LB/S	3.1	3.4	KG/S	1.4	1.6

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	67.8	68.6	70.2	71.7	73.0	78.2	75.5	78.3	81.5	83.6	83.0
63	71.7	72.3	73.2	74.7	76.6	79.1	79.1	82.0	85.7	87.5	87.9
80	73.6	73.6	74.6	75.9	76.9	86.7	80.1	83.6	88.5	90.3	87.4
100	75.6	75.6	76.6	76.6	78.7	79.8	82.1	86.0	90.6	91.5	86.3
125	75.6	76.1	77.6	79.2	80.2	81.8	83.3	87.1	91.8	93.8	87.0
160	75.9	77.0	77.8	79.4	81.2	82.5	84.5	87.9	92.6	92.7	87.0
200	76.1	76.7	77.6	80.6	82.6	82.8	85.4	88.0	92.6	92.7	88.1
250	77.3	79.1	79.8	80.3	82.1	83.2	85.4	87.8	92.2	92.6	88.4
315	76.6	77.9	79.0	80.3	81.7	82.9	85.4	87.5	90.6	91.6	87.0
400	75.6	77.2	78.7	80.0	81.7	82.9	85.4	87.1	88.6	89.5	86.6
500	75.1	76.6	77.7	79.6	81.1	82.8	85.5	86.3	88.8	87.6	82.6
630	74.1	75.9	77.2	79.2	80.3	82.6	85.4	85.9	85.6	85.7	79.5
800	73.8	75.3	76.5	78.5	80.1	81.5	83.8	85.4	83.0	82.7	75.6
1000	72.3	74.7	75.9	77.9	80.1	81.9	84.0	83.6	82.9	80.9	72.7
1250	71.5	74.1	75.6	77.5	79.7	81.0	83	82.6	81.7	79.6	69.7
1600	69.5	72.6	74.5	76.8	78.7	80.5	87.0	81.1	78.7	75.5	65.9
2000	68.4	71.5	73.0	75.3	77.4	79.9	80.3	79.5	77.5	73.3	61.8
2500	66.3	69.3	71.3	73.9	76.0	77.7	78.5	77.9	75.8	70.6	56.8
3150	63.2	66.6	69.0	71.7	73.5	75.2	75.0	74.2	70.9	66.3	50.1
4000	60.0	64.1	66.7	69.2	71.1	72.1	72.5	70.2	66.8	59.8	42.7
5000	57.7	61.0	61.0	67.6	69.3	70.2	70.6	67.9	63.5	55.7	37.0
6300	53.9	57.4	61.0	64.2	66.1	67.6	68.3	63.8	60.7	49.7	27.7
8000	48.8	52.5	56.0	58.5	60.6	61.2	60.0	57.1	51.1	40.1	16.0
10000	38.3	43.2	47.6	50.4	57.0	51.7	50.9	46.2	38.8	25.2	0.0
OASPL	86.7	88.2	89.3	91.0	92.6	94.2	96.1	97.8	100.8	101.5	97.5
PNL	93.3	95.7	97.5	99.7	101.5	103.1	104.5	104.5	105.6	105.2	99.0

600. SIDELINE

PNL	106.2	108.4	110.2	112.4	114.3	116.0	117.5	117.6	117.5	117.1	112.0

2000. SIDELINE

PNL	86.8	88.9	90.5	92.6	94.4	95.9	97.3	98.0	99.4	99.1	93.5

4000. SIDELINE

PNL	77.2	79.4	80.7	82.7	84.4	85.6	87.6	88.4	90.5	90.0	83.9

6000. SIDELINE

PNL	71.2	73.3	74.7	76.5	78.2	79.4	81.1	82.3	84.0	84.1	77.3

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Reference Exhaust System Without Engine Secondary Flow Simulation; Configuration 2Au; Condition 5501

a.) Model Data Measured At 15 Ft. Radius

STAND A206 RIG ID 705307 TEST DATE 11/03/76 SCALE RATIO 7.0/1 RUN NUMBER 20055 CONDITION 5501

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		1.31	1.35		1.31	1.35	THRUST,IDL LB			N		
TEMP	(R)	1266.0	599.0	(K)	703.3	332.8	THRUST,MEA LB		0.0	N		0.0
RHO	LB/FT3	0.034	0.073	KG/M3	0.543	1.164	AREA (MOD) SQFT			SQM		
VEL	FPS	1067.5	767.7	M/S	325.4	234.0	W (MODEL) LB/S	1.7	2.4	KG/S	0.8	1.1

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (MODEL)

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	POWER DB-1/3
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.125	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.160	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.200	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.315	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.400	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.630	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.800	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.60	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3.15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6.30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
12.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
40.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
50.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
63.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
80.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LSPL	90.6	93.7	97.0	96.1	99.3	101.7	103.6	105.6	108.6	111.0	111.0	

OAPWL = [illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND A206 RIG ID 705307 TEST DATE 11/03/76 SCALE RATIO 7.0/1 RUN NUMBER 20055 CONDITION 5501

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S	[illegible]	[illegible]	KG/S	[illegible]	[illegible]
P.R.		1.31	1.35		1.31	1.35	THRUST,IDL LB			N		
TEMP	(R)	1266.0	599.0	(K)	703.3	332.8	THRUST,MEA LB		0.0	N		0.0
RHO	LB/FT3	0.034	0.073	KG/M3	0.543	1.164	AREA (MOD) SQFT	[illegible]	[illegible]	SQM	[illegible]	[illegible]
VEL	FPS	1062.5	767.7	M/S	325.4	234.0	W (MODEL) LB/S	1.7	2.4	KG/S	[illegible]	1.1

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	56.2	57.3	58.5	59.7	60.2	62.0	63.4	66.3	68.8	69.6	68.7
63	61.0	59.6	62.1	63.6	63.0	66.1	66.9	69.3	71.0	73.3	72.4
80	59.9	60.8	62.4	63.5	64.4	66.1	67.7	70.3	74.2	75.2	72.3
100	62.0	62.7	64.3	65.0	65.0	67.7	69.6	72.0	74.7	76.1	71.0
125	61.1	63.4	64.0	65.6	66.2	67.7	69.2	71.6	74.9	76.2	72.9
160	61.5	62.3	64.0	65.5	66.7	69.0	70.4	72.2	74.2	74.1	68.6
200	60.1	62.2	64.2	65.3	66.7	68.6	70.2	72.1	73.5	71.6	65.0
250	59.7	61.7	63.9	65.6	66.3	68.6	70.1	71.2	71.7	69.2	67.6
315	59.0	61.4	63.3	64.7	66.1	68.1	69.7	70.5	70.1	65.9	58.4
400	58.8	61.5	63.4	64.9	66.0	68.2	69.3	69.8	68.6	63.3	55.8
500	58.1	60.7	62.7	64.3	65.3	67.4	68.3	68.4	66.6	60.6	52.8
630	58.1	60.2	62.2	63.5	64.7	66.7	67.0	67.0	64.4	57.0	49.1
800	57.7	58.6	61.0	62.5	63.6	65.4	65.9	65.6	61.6	54.7	45.5
1000	56.1	57.9	59.9	61.4	62.5	64.2	64.0	62.9	59.0	51.0	41.6
1250	53.7	56.3	58.3	59.7	60.7	62.3	62.4	60.7	56.4	48.7	38.0
1600	51.9	54.6	56.6	58.6	58.0	60.3	60.7	58.3	53.3	45.4	33.8
2000	56.4	52.5	54.9	56.0	56.8	56.2	58.0	55.4	50.4	42.3	29.2
2500	48.2	50.3	52.5	53.9	54.7	55.9	55.2	52.5	47.2	38.3	23.8
3150	46.0	47.5	49.0	51.0	51.7	52.6	51.0	48.7	43.1	33.6	17.6
4000	41.5	44.6	46.8	48.1	49.6	49.3	48.6	46.5	39.6	28.2	11.5
5000	38.7	42.0	45.0	46.0	47.6	46.8	45.9	42.6	36.6	25.5	8.9
6300	36.9	38.3	41.6	42.0	43.3	43.5	42.6	38.0	31.7	20.1	2.1
8000	29.9	33.6	36.7	37.5	38.9	38.6	37.6	33.0	25.4	14.4	0.0
10000	20.6	24.9	28.6	30.1	30.7	30.0	27.7	23.1	14.7	1.9	0.0
OASPL	71.3	72.8	74.6	75.4	76.5	78.9	80.1	81.5	83.6	83.1	79.5
PNL	75.9	78.2	80.3	81.7	82.8	84.6	85.3	85.3	86.8	87.3	78.5

400. SIDELINE PNL	88.7	90.7	92.7	94.0	95.0	96.6	97.2	97.1	96.4	94.6	88.8
2000. SIDELINE PNL	64.5	71.9	74.1	75.5	76.6	78.4	79.2	79.2	78.7	76.1	70.2
4000. SIDELINE PNL	59.9	62.5	64.8	66.2	67.3	69.2	69.9	70.6	69.8	67.2	61.2
6000. SIDELINE PNL	53.6	56.4	58.7	60.2	61.3	63.2	63.9	64.1	64.1	61.6	55.3

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Reference Exhaust System Without Engine Secondary Flow Simulation; Configuration 2Au; Condition 5502

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 105307 TEST DATE 11/03/76 SCALE RATIO 7.0/1 RUN NUMBER 20055 CONDITION 5502

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (MODEL)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	POWER DB-1.0W
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	77.4	75.1	77.1	78.5	78.1	79.5	80.7	83.0	85.9	89.2	93.3	105.0
.125	76.0	76.1	79.5	78.1	79.0	81.4	80.3	84.0	88.4	91.1	93.3	108.9
.160	77.0	80.6	79.3	79.4	78.1	79.0	81.4	83.5	85.6	91.2	95.9	109.2
.200	77.4	78.1	79.0	80.9	82.0	83.0	85.5	87.6	93.1	97.6	98.9	111.9
.250	79.1	80.4	81.4	83.5	83.5	85.9	87.0	90.5	95.3	99.0	101.0	114.0
.315	82.0	82.0	83.2	84.2	86.5	87.1	89.5	93.0	98.1	101.7	104.6	116.5
.400	85.4	85.0	86.1	87.7	88.6	91.4	92.0	96.6	101.2	105.1	107.7	115.9
.500	88.3	86.3	87.3	88.6	89.0	91.4	94.0	98.0	104.0	107.5	107.6	[illegible]
.630	89.0	88.4	89.1	90.5	91.0	91.3	96.3	100.7	105.1	108.0	107.1	117.0
.800	88.1	85.5	89.5	91.1	92.1	93.8	96.2	100.7	106.4	109.7	109.7	[illegible]
1.00	89.3	89.2	90.0	91.5	92.1	95.7	97.9	101.6	106.4	109.2	107.5	[illegible]
1.25	88.1	89.0	90.4	91.4	93.0	95.4	98.1	101.5	105.7	107.0	105.8	[illegible]
1.60	87.3	88.6	89.9	90.0	[illegible]	95.3	97.9	100.8	103.9	104.7	103.1	[illegible]
2.00	86.6	88.0	89.5	90.8	92.4	95.2	97.6	100.3	102.5	103.7	99.6	[illegible]
2.50	88.3	88.1	89.5	90.9	92.5	95.4	97.7	99.9	100.6	98.9	96.3	[illegible]
3.15	88.0	87.5	89.2	90.6	92.2	[illegible]	97.3	99.6	99.1	96.5	93.6	[illegible]
4.00	88.1	87.0	89.1	90.3	91.8	94.7	96.8	97.0	97.2	94.3	91.6	116.0
5.00	85.9	86.5	88.1	89.4	91.6	93.8	95.5	96.4	95.0	91.0	88.3	118.0
6.30	85.3	86.4	87.8	89.1	90.6	93.2	94.9	95.0	93.2	89.9	86.1	117.2
8.00	83.5	85.3	86.0	88.2	89.7	92.2	93.3	93.3	91.1	87.9	83.6	117.0
10.0	82.7	84.4	85.9	87.1	88.5	91.1	92.1	91.7	89.0	85.1	80.3	118.5
12.5	82.1	83.3	85.6	86.6	87.5	89.8	90.7	89.9	87.3	81.4	77.8	116.1
16.0	81.1	82.7	85.7	85.6	86.7	88.6	89.1	88.3	85.8	81.7	75.4	[illegible]
20.0	79.1	80.6	82.1	83.3	84.6	86.4	86.9	85.8	82.7	78.7	73.1	109.7
25.0	77.6	79.0	80.9	82.6	83.6	85.8	85.4	83.9	82.5	77.9	72.5	109.1
31.5	75.8	77.6	79.6	80.6	81.9	83.7	83.1	82.1	80.6	76.9	72.1	103.7
40.0	74.1	76.0	78.3	79.3	80.3	81.7	82.1	80.9	79.2	76.0	71.6	100.2
50.0	72.2	73.7	75.7	76.4	78.2	79.4	79.6	79.2	78.6	77.6	75.6	100.2
63.0	69.7	71.6	73.1	74.2	75.5	76.4	77.7	77.1	77.2	77.6	77.1	97.8
80.0	68.5	68.2	76.1	72.1	73.2	74.2	74.6	75.5	76.8	77.6	77.8	96.6
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LSPL	99.6	99.9	101.2	102.4	103.7	104.3	108.4	111.6	114.5	116.9	116.5	

OAPWL = [illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 105307 TEST DATE 11/03/76 SCALE RATIO 7.0/1 RUN NUMBER 20055 CONDITION 5502

FAA DAY — 1/3 OCTAVE BAND — 1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	59.5	60.2	61.8	62.9	63.5	65.3	67.0	70.6	72.9	74.3	73.2
63	62.9	63.0	65.3	66.4	67.2	69.6	70.3	73.0	76.6	77.7	76.9
80	63.8	64.5	65.9	67.3	67.6	69.6	71.5	74.4	76.4	80.1	77.0
100	64.3	66.5	67.8	69.1	69.5	71.4	73.4	76.4	79.7	81.2	75.9
125	65.4	67.6	68.0	69.7	70.5	71.9	73.5	76.9	81.0	82.1	78.5
160	66.5	67.1	68.4	69.8	71.2	73.6	75.1	77.7	80.9	81.3	76.0
200	65.3	66.9	68.8	69.9	71.4	73.3	75.3	77.6	80.2	79.1	74.3
250	64.4	66.4	68.2	69.2	70.8	73.1	75.6	76.7	78.2	76.6	71.3
315	63.4	65.6	67.5	69.0	70.4	72.8	74.6	75.9	76.2	73.1	67.1
400	63.0	65.6	67.4	69.0	70.4	72.9	74.4	75.4	74.6	70.1	63.4
500	62.4	64.7	66.9	68.5	69.9	71.4	73.7	74.2	72.5	67.3	60.1
630	62.3	64.6	66.6	67.9	69.3	71.7	73.6	72.8	70.3	64.6	56.8
800	61.7	63.1	65.2	66.7	68.1	70.4	71.3	70.9	67.5	61.4	53.6
1000	60.6	62.6	64.3	65.9	67.3	69.4	70.2	68.9	65.6	58.6	49.5
1250	58.3	61.0	63.0	64.8	65.9	67.9	68.1	66.6	62.2	55.1	45.6
1600	56.8	59.3	61.4	62.6	64.6	66.0	66.0	64.6	58.9	51.3	40.6
2000	55.1	57.4	59.7	60.9	62.2	63.9	63.7	61.2	56.6	48.0	35.1
2500	52.9	55.2	57.4	58.9	[illegible]	61.0	60.9	58.2	52.8	44.1	29.4
3150	49.4	52.5	54.5	56.6	57.6	58.1	57.2	54.6	48.4	39.3	22.6
4000	45.9	49.4	51.4	53.6	54.3	54.6	53.7	49.8	44.4	33.7	16.4
5000	43.3	46.8	49.7	51.0	52.0	52.4	51.2	47.2	41.4	31.6	13.3
6300	39.2	43.6	46.4	47.7	48.4	48.7	47.2	47.9	36.4	25.7	6.3
8000	34.4	38.1	41.3	42.4	43.8	43.8	42.0	37.0	30.8	20.1	0.0
10000	25.1	29.4	33.1	34.7	35.5	34.8	32.4	27.8	20.2	9.6	0.0
OASPL	75.5	77.1	78.7	80.1	81.3	83.5	84.9	86.7	88.6	86.9	83.6
PNL	80.4	82.7	84.0	86.2	87.5	89.6	90.6	91.6	91.2	89.6	83.6
600. SIDELINE PNL	93.3	[illegible]	97.4	98.8	100.0	101.8	102.4	102.7	[illegible]	100.4	95.2
2000. SIDELINE PNL	76.1	[illegible]	79.3	80.0	81.3	83.4	84.5	84.9	85.4	83.3	77.4
4000. SIDELINE PNL	64.0	67.1	69.2	70.7	72.0	74.2	75.2	75.0	76.6	74.6	68.2
6000. SIDELINE PNL	58.4	63.0	63.7	64.8	66.3	68.2	69.2	70.0	70.9	68.8	62.3

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

... Engine Secondary Flow Simulation;
Configuration 2Au; Condition 5503

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 705307 TEST DATE 11/03/76 SCALE RATIO 7.0/1 RUN NUMBER ... CONDITION 5503

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S	0.0	0.0 KG/S		0.0	0.0
P.R.		1.46	1.51		1.46	1.51	THRUST,IDL LB		N			
TEMP	(R)	1315.0	629.0	(K)	730.6	349.4	THRUST,MEA LB		N			0.0
RHO	LB/FT3	0.034	0.071	KG/M3	0.540	1.144	AREA (MOD) SQFT		SQM			
VEL	FPS	1960.0	919.0	M/S	596.5	280.1	W (MODEL) LB/S	2.7	2.0 KG/S		1.0	1.3

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (MODEL)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	POWER DB-RE
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	78.1	78.2	78.5	78.4	79.6	80.4	81.9	85.0	88.0	90.1	94.0	108.6
.125	78.0	80.1	80.5	79.3	81.2	82.6	81.9	85.6	89.6	92.0	94.3	108.1
.160	79.2	81.2	80.6	80.5	79.7	81.6	82.8	85.2	90.6	93.8	96.6	109.1
.200	78.5	78.8	81.0	82.1	83.2	84.5	86.5	89.0	93.9	98.7	100.0	112.6
.250	80.0	81.6	82.6	84.1	84.0	85.0	88.2	91.6	96.4	100.3	102.0	114.9
.315	82.9	82.8	84.3	85.4	86.3	88.1	94.7	95.1	99.0	10[illegible].6	105.1	117.5
.400	85.4	85.7	87.6	90.6	89.9	92.3	94.0	97.0	102.2	106.1	108.9	121.6
.500	87.5	87.5	88.0	89.5	90.4	92.4	95.2	99.5	105.2	108.8	109.6	122.9
.630	90.6	87.6	90.7	91.6	92.3	94.5	97.6	101.9	106.6	110.3	108.4	124.3
.800	89.5	90.6	90.8	92.4	93.5	94.0	97.6	102.5	108.0	111.3	111.6	125.3
1.00	90.5	91.0	91.5	92.5	94.1	96.9	99.3	103.4	108.2	110.9	109.2	125.3
1.25	89.6	90.8	92.2	92.9	94.7	96.7	99.5	103.4	107.5	109.0	108.1	124.6
1.60	89.0	90.4	91.4	92.4	94.1	96.7	99.6	102.7	105.8	106.9	105.7	122.9
2.00	88.3	89.6	90.9	92.1	93.9	96.6	99.2	102.2	104.1	103.8	102.2	121.3
2.50	87.7	89.6	90.8	92.2	94.6	96.5	99.3	101.7	102.7	101.0	98.9	120.3
3.15	87.6	88.0	90.7	92.0	93.6	96.3	98.9	100.0	100.7	98.7	95.8	119.2
4.00	87.4	88.0	90.5	91.7	93.4	96.1	98.4	99.6	98.9	96.1	93.3	118.2
5.00	87.3	87.8	89.7	90.8	92.4	95.1	97.0	98.1	96.5	93.6	90.5	118.1
6.30	86.8	87.6	89.2	90.4	92.2	94.5	96.3	96.7	94.6	91.4	88.6	113.7
8.00	85.0	86.5	88.4	89.6	91.3	93.6	95.0	95.2	92.7	89.2	85.1	110.6
10.0	84.0	85.7	87.5	88.5	90.0	92.3	93.6	93.4	90.7	86.9	82.3	113.6
12.5	83.5	84.5	86.6	87.5	88.9	91.0	92.2	91.5	88.9	84.9	79.8	111.6
16.0	82.4	83.6	85.3	86.5	87.8	90.1	90.8	90.2	87.6	83.4	77.6	110.6
20.0	80.5	81.9	83.6	84.9	86.1	87.8	88.7	87.0	85.4	81.3	75.7	108.3
25.0	78.8	80.9	82.5	83.6	85.0	86.4	87.1	86.1	84.2	79.7	76.6	108.9
31.5	77.6	78.5	81.1	81.9	83.3	84.5	85.4	84.5	82.2	78.0	76.1	105.2
40.0	75.4	77.3	79.7	80.8	82.0	83.3	84.0	83.3	81.3	79.1	77.9	104.6
50.0	73.7	75.2	77.4	78.0	79.9	81.2	82.6	82.6	86.6	86.3	81.1	102.6
63.0	71.4	72.6	74.8	76.2	77.4	78.4	79.5	80.4	80.3	81.0	82.4	100.7
80.0	68.7	70.8	72.8	73.1	75.3	76.4	77.1	79.7	80.5	81.3	83.5	97.7
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	100.3	101.3	102.6	103.7	105.2	107.5	109.9	112.0	116.2	118.5	118.1	OAPWL = 135.9

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 705307 TEST DATE 11/03/76 SCALE RATIO 7.0/1 RUN NUMBER ... CONDITION 5503

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S	105.0	135.7 KG/S		48.0	61.6
P.R.		1.46	1.51		1.46	1.51	THRUST,IDL LB		N			
TEMP	(R)	1315.0	629.0	(K)	730.6	349.4	THRUST,MEA LB	0.0	N		0.0	
RHO	LB/FT3	0.034	0.071	KG/M3	0.540	1.144	AREA (MOD) SQFT		SQM			
VEL	FPS	1960.0	919.0	M/S	596.5	280.1	W (MODEL) LB/S	2.7	2.0 KG/S		1.0	1.3

FAA DAY — 1/3 OCTAVE BAND — 1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	66.4	61.0	62.9	64.1	66.9	66.3	68.2	71.5	73.6	75.2	76.3
63	62.9	63.0	66.2	67.3	68.5	70.5	71.5	74.2	77.6	78.7	78.1
80	65.6	65.0	66.2	69.0	69.2	70.6	72.7	76.7	80.0	81.4	78.2
100	67.3	67.5	69.2	70.2	70.8	72.6	73.1	78.1	81.3	82.7	77.7
125	66.8	68.7	69.3	71.0	72.0	72.9	74.9	78.7	82.6	83.7	79.6
160	67.7	68.9	69.9	71.6	72.5	74.0	76.5	79.5	82.7	83.0	77.7
200	66.7	68.7	70.2	71.4	73.1	74.2	76.0	79.4	82.0	81.1	76.6
250	66.1	68.2	69.7	70.8	72.4	74.3	76.3	78.6	80.1	78.0	73.9
315	65.1	67.0	68.9	70.3	71.9	74.0	76.0	77.8	78.0	75.2	69.7
400	64.4	66.9	68.7	70.2	71.9	74.0	76.0	77.2	76.5	72.2	66.6
500	63.8	66.6	68.4	69.4	71.3	73.6	75.3	76.0	74.1	69.5	62.3
630	63.6	65.8	68.0	69.3	70.9	73.1	74.6	75.0	72.4	66.4	59.1
800	63.1	64.6	66.0	68.1	69.5	71.7	72.8	72.6	69.0	63.2	55.2
1000	62.1	63.0	65.9	67.2	68.9	70.7	71.6	70.6	66.4	60.6	51.4
1250	59.8	62.6	64.0	66.0	67.7	69.6	70.0	68.3	63.6	57.0	47.1
1600	57.9	60.6	63.0	64.2	65.5	67.2	67.6	65.7	60.5	53.1	42.0
2000	56.5	58.6	61.3	62.4	63.6	65.1	65.2	62.8	57.6	49.5	37.1
2500	54.2	56.6	59.0	60.4	61.3	63.1	62.6	60.1	54.6	45.8	31.6
3150	50.8	55.6	56.6	57.5	58.6	60.3	59.6	56.0	50.2	40.9	25.4
4000	47.1	54.7	53.2	54.6	55.7	56.2	55.0	52.6	45.4	35.2	20.4
5000	44.5	47.6	51.2	52.3	53.6	53.7	52.9	49.6	43.8	32.9	17.9
6300	40.5	44.2	47.6	49.2	50.1	50.6	49.1	45.3	38.6	28.2	11.6
8000	35.8	39.6	43.0	44.0	45.5	46.2	44.2	40.8	33.6	23.4	5.3
10000	26.0	31.0	34.8	36.7	37.4	36.8	34.9	31.1	23.3	11.0	0.0
OASPL	76.8	78.4	80.2	81.4	82.8	84.7	86.4	88.6	90.6	90.6	86.5
PNL	87.0	86.2	86.4	87.7	89.1	90.9	92.2	93.8	93.9	90.8	85.5
400. SIDELINE PNL	94.7	96.7	98.9	100.2	101.5	103.2	103.9	104.5	104.3	102.2	97.1
2000. SIDELINE PNL	75.5	77.9	80.0	81.6	82.9	84.7	86.6	86.6	87.4	85.1	79.3
4000. SIDELINE PNL	66.0	68.5	70.7	72.1	73.6	75.4	76.8	77.7	78.5	76.4	70.1
6000. SIDELINE PNL	59.9	62.4	64.7	66.2	67.6	69.4	70.6	71.9	72.0	70.7	64.1

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Reference Exhaust System Without Engine Secondary Flow Simulation; Configuration 2Au; Condition 5504

a.) Model Data Measured At 15 Ft. Radius

STAND A206 RIG ID 70530? TEST DATE 11/03/76 SCALE RATIO 7.0/1 RUN NUMBER 20055 CONDITION 5504

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SUM	0.0	0.0	MASS FLOW LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		1.76	1.69		1.76	1.69	THRUST,IDL LB			N		
TEMP	(R)	1460.0	647.0	(K)	781.1	359.4	THRUST,MEA LB		0.0	N		0.0
RHO	LB/FT3	0.033	0.072	KG/M3	0.525	1.160	AREA (MOD) SQFT			SUM		
VEL	FPS	1580.0	1045.0	M/S	481.8	317.9	W (MODEL) LB/S	2.0	2.9	KG/S	1.1	1.3

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (MODEL)

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PGWIR RE-1.0W
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	77.4	82.6	82.0	83.4	83.6	86.5	86.4	89.6	91.6	94.4	98.0	0.0
.125	79.0	86.4	84.1	83.3	85.7	86.7	88.1	89.5	93.0	96.5	98.7	110.9
.160	83.7	87.6	85.6	84.7	83.9	85.6	86.9	89.6	94.5	98.8	101.6	112.9
.200	83.1	85.7	85.1	85.9	87.7	88.4	90.0	93.7	98.6	103.2	105.6	113.9
.250	84.3	88.1	88.5	88.1	88.7	89.7	92.1	95.7	100.7	105.0	107.1	117.0
.315	87.6	90.0	88.5	89.5	90.4	92.1	94.9	99.5	103.9	107.7	110.3	119.5
.400	88.9	92.5	91.6	92.6	94.2	96.2	98.6	102.9	107.6	111.5	114.1	122.9
.500	92.0	93.4	92.7	93.6	94.4	96.6	98.7	104.4	110.6	114.1	114.1	126.2
.630	94.6	96.1	96.0	96.1	96.7	98.9	102.5	107.4	112.7	115.6	113.2	126.1
.800	93.9	97.3	95.2	96.0	96.6	99.4	102.6	108.6	114.3	117.0	115.9	129.0
1.00	95.4	96.0	96.4	97.5	99.2	101.9	105.0	110.4	115.6	117.3	114.9	131.2
1.25	95.0	96.6	98.1	98.9	100.0	102.5	105.5	111.3	116.4	117.3	115.4	131.9
1.60	96.7	96.2	98.3	99.0	100.6	102.0	105.7	110.5	115.3	117.2	115.0	132.9
2.00	95.9	95.6	97.3	98.3	100.1	101.6	105.0	109.9	113.5	116.9	113.7	132.0
2.50	94.4	95.6	96.5	97.9	100.0	102.6	105.9	109.2	111.9	112.7	110.6	130.6
3.15	93.6	95.0	96.2	97.5	99.6	102.5	105.7	108.2	109.0	110.1	107.7	128.9
4.00	93.0	95.0	96.0	97.1	99.3	102.4	105.4	107.2	108.6	106.8	103.4	127.3
5.00	92.0	94.6	95.1	96.5	98.6	101.6	104.3	105.8	106.6	103.6	99.2	125.9
6.30	92.0	93.5	94.7	95.9	98.1	100.9	103.7	104.4	103.8	101.0	95.7	124.3
8.00	90.6	[illegible]	94.0	95.5	97.6	100.4	102.4	102.6	101.8	98.4	93.7	123.0
10.0	89.7	91.6	93.3	94.7	96.5	99.3	101.1	101.0	99.2	96.2	91.3	121.7
12.5	88.9	90.4	92.2	93.5	95.4	97.9	99.5	98.8	96.6	93.8	88.6	120.2
16.0	87.6	89.3	91.0	92.5	94.1	96.7	97.9	96.9	94.7	91.4	85.6	118.3
20.0	85.6	87.7	89.2	90.6	92.4	94.5	95.6	94.4	92.2	88.6	82.7	117.0
25.0	83.0	86.4	88.3	89.6	91.3	92.8	93.9	92.3	90.8	87.0	81.6	115.6
31.5	81.9	84.3	86.9	87.8	89.6	90.9	92.0	90.6	88.8	85.9	81.5	113.3
40.0	80.3	82.9	[illegible]	86.5	88.0	89.7	90.4	89.4	87.6	86.3	82.4	111.5
50.0	70.4	80.0	82.0	83.6	85.0	87.2	88.6	87.7	86.9	87.7	85.5	110.2
63.0	76.0	[illegible]	80.1	81.7	83.2	84.6	85.5	85.6	86.0	88.8	86.0	108.3
80.0	73.1	75.5	77.3	78.5	80.6	82.2	83.0	84.4	86.7	89.0	87.6	108.0
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	105.5
												0.0

CAPNL = 140.9

LSPL	106.6	107.5	106.0	109.2	111.0	113.4	116.2	119.0	123.9	125.7	124.5

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND A206 RIG ID 70530? TEST DATE 11/03/76 SCALE RATIO 7.0/1 RUN NUMBER 20055 CONDITION 5504

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SUM			MASS FLOW LB/S	138.7	140.1	KG/S	[illegible]	[illegible]
P.R.		1.76	1.69		1.76	1.69	THRUST,IDL LB			N		
TEMP	(R)	1460.0	647.0	(K)	781.1	359.4	THRUST,MEA LB		0.0	N		0.0
RHO	LB/FT3	0.033	0.072	KG/M3	0.525	1.160	AREA (MOD) SQFT			SUM		
VEL	FPS	1580.0	1045.0	M/S	481.8	317.9	W (MODEL) LB/S	2.0	2.9	KG/S	1.1	1.3

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	64.5	66.2	67.1	68.2	69.0	70.3	72.4	75.9	78.7	80.3	79.5
63	66.4	70.7	70.4	71.3	72.8	74.4	76.1	79.3	82.4	84.1	83.3
80	69.5	[illegible]	71.3	72.3	73.0	74.0	77.2	80.0	85.4	86.7	83.3
100	71.9	74.2	73.3	74.1	75.7	77.6	79.8	83.6	87.3	88.2	82.0
125	71.2	75.4	73.7	75.4	76.5	77.5	79.9	84.8	86.9	89.4	84.7
160	72.6	74.7	74.0	76.6	77.6	79.0	82.2	86.5	90.1	89.4	83.4
200	73.6	74.7	76.5	77.4	79.2	80.4	82.7	87.2	90.9	89.4	83.9
250	73.8	74.6	76.8	77.4	78.4	80.6	82.8	86.4	89.6	89.1	84.6
315	72.7	73.2	75.3	76.5	78.6	80.2	82.6	85.5	87.4	86.3	81.2
400	71.1	73.1	74.6	76.6	77.9	80.1	82.6	84.7	85.7	83.9	77.7
500	70.2	72.2	73.9	75.4	77.3	79.7	82.1	83.4	83.2	80.9	74.2
630	69.2	72.0	73.5	74.7	76.6	[illegible]	81.6	82.1	81.1	77.1	69.2
800	68.6	70.6	72.2	73.6	75.7	78.2	80.1	80.3	78.5	73.2	63.9
1000	67.3	69.7	71.4	72.7	74.8	77.1	79.6	78.3	75.6	69.7	59.1
1250	65.4	68.4	70.2	71.9	73.8	76.4	77.2	76.1	72.9	66.2	55.7
1600	63.4	66.5	68.8	70.4	72.6	74.2	75.0	73.3	69.1	62.4	51.0
2000	61.9	64.5	66.9	68.4	70.1	72.6	72.5	70.1	65.3	58.4	45.9
2500	59.4	62.3	64.7	66.4	67.6	69.7	69.7	66.6	61.7	53.0	39.8
3150	55.9	59.4	61.6	63.5	64.8	66.2	65.9	62.6	57.1	48.2	32.4
4000	52.1	56.2	59.6	60.4	62.6	62.8	62.2	58.4	52.9	42.0	25.7
5000	49.4	53.5	57.0	58.2	59.7	60.1	59.5	55.7	49.6	46.6	22.7
6300	45.4	49.9	53.3	54.9	56.1	56.7	55.5	51.4	44.8	35.4	15.9
8000	40.6	45.2	48.4	49.8	51.4	51.6	50.2	46.3	39.7	36.0	9.7
10000	31.4	36.6	40.1	42.2	43.2	42.0	40.9	36.5	29.6	18.0	0.0
OASPL	82.5	84.7	85.6	86.4	88.4	90.4	92.6	95.4	98.1	97.6	92.0
PNL	88.1	90.4	92.1	93.5	95.2	97.1	98.9	100.1	101.3	99.6	93.6
400. SIDELINE PNL	100.2	102.0	104.5	106.0	107.6	109.5	110.7	111.7	112.6	110.9	105.2
2000. SIDELINE PNL	81.9	84.2	85.8	87.3	89.6	90.9	92.7	94.2	95.7	93.0	87.7
4000. SIDELINE PNL	72.6	74.9	76.6	78.0	79.7	81.6	83.5	85.5	87.2	85.2	78.4
6000. SIDELINE PNL	66.8	69.6	70.7	72.0	73.7	75.6	77.5	79.9	82.0	79.7	72.0

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Reference Exhaust System Without Engine Secondary Flow Simulation; Configuration 2Au; Condition 5505

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 765307 TEST DATE 11/03/76 SCALE RATIO 7.0/1 RUN NUMBER 20055 CONDITION 5505

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		1.81	1.75		1.81	1.75
TEMP	(R)	1436.0	669.0	(K)	797.8	369.6
RHO	LB/FT3	0.032	0.070	KG/M3	0.519	1.120
VEL	FPS	1644.4	1089.4	M/S	501.2	332.0

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (MODEL)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	POWER 60-170
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	78.0	81.9	84.1	84.4	84.6	85.6	87.3	89.9	91.9	95.7	99.9	[illegible]
.125	86.9	84.6	84.0	84.3	86.7	87.7	87.1	90.8	94.8	97.6	100.2	[illegible]
.160	85.1	87.1	86.1	85.0	84.7	85.9	88.2	90.1	95.7	100.0	103.0	[illegible]
.200	84.1	84.7	86.3	87.4	88.7	89.7	91.9	94.6	99.9	104.4	106.3	[illegible]
.250	85.4	86.1	87.6	89.2	89.9	90.9	93.3	97.2	102.1	106.5	108.5	[illegible]
.315	88.1	87.6	89.6	90.4	91.4	93.2	96.2	100.4	105.1	109.0	111.5	[illegible]
.400	90.1	90.9	92.6	93.2	95.0	97.6	99.3	103.7	108.0	112.0	115.1	[illegible]
.500	92.9	92.0	93.7	94.0	95.6	97.5	100.7	105.5	111.9	115.0	115.2	[illegible]
.630	93.4	94.5	95.7	96.8	97.5	99.0	103.4	108.5	113.9	117.0	114.2	[illegible]
.800	94.7	96.1	96.1	97.0	98.9	100.3	103.7	109.0	115.6	118.0	116.7	[illegible]
1.00	96.0	96.0	97.2	98.5	100.3	102.0	106.0	111.9	117.1	118.4	115.6	[illegible]
1.25	96.6	97.0	99.0	99.0	101.0	103.6	106.4	112.0	118.1	118.5	116.3	[illegible]
1.60	97.7	98.7	99.4	100.1	101.7	104.6	107.6	112.1	117.3	118.6	116.9	[illegible]
2.00	97.2	97.4	98.7	99.5	101.3	103.7	107.2	111.4	115.7	117.6	115.2	[illegible]
2.50	95.8	96.9	97.8	99.3	101.3	104.6	107.2	110.8	114.2	115.0	112.5	[illegible]
3.15	95.6	96.0	97.5	98.8	100.8	103.8	107.2	109.6	112.2	112.4	109.6	[illegible]
4.00	94.4	95.6	97.1	98.5	100.7	103.8	107.6	108.8	110.4	109.6	105.6	[illegible]
5.00	94.2	94.5	96.5	97.4	100.1	103.1	105.9	107.5	108.3	105.7	101.6	[illegible]
6.30	93.4	94.4	96.6	97.6	99.7	102.3	105.3	105.9	106.1	102.9	97.6	[illegible]
8.00	92.6	93.7	95.3	96.8	98.9	101.8	104.1	104.4	103.9	100.6	95.3	[illegible]
10.0	91.1	93.0	94.7	96.1	97.9	100.8	102.7	102.5	101.4	98.2	93.0	[illegible]
12.5	90.4	91.4	93.4	95.0	97.1	99.6	101.2	100.7	98.8	96.0	90.4	[illegible]
16.0	89.1	90.9	92.5	94.1	95.6	98.4	99.6	98.8	96.9	93.8	87.4	[illegible]
20.0	86.9	89.0	91.6	92.5	94.1	96.2	97.3	96.6	94.3	91.1	84.4	[illegible]
25.0	85.3	88.1	89.8	91.4	92.9	94.7	95.5	94.5	92.8	88.9	87.4	[illegible]
31.5	83.4	85.0	88.4	89.0	91.4	92.8	93.9	92.9	90.9	87.5	82.4	[illegible]
40.0	82.0	84.1	86.9	88.5	89.4	91.2	92.0	91.0	89.5	87.2	82.8	[illegible]
50.0	80.0	82.0	84.1	86.0	87.4	88.8	89.9	90.5	88.7	88.3	85.7	[illegible]
63.0	77.0	79.4	81.4	84.2	84.0	85.7	87.2	89.4	88.3	88.8	86.9	[illegible]
80.0	74.8	76.5	78.5	81.4	82.1	83.4	84.7	88.9	86.3	89.1	87.5	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OSPL	107.1	108.0	109.2	110.4	111.2	114.7	117.6	121.3	125.7	127.1	125.0	

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 765307 TEST DATE 11/03/76 SCALE RATIO 7.0/1 RUN NUMBER 20055 CONDITION 5505

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		1.81	1.75		1.81	1.75
TEMP	(R)	1436.0	669.0	(K)	797.8	369.6
RHO	LB/FT3	0.032	0.070	KG/M3	0.519	1.120
VEL	FPS	1644.4	1089.4	M/S	501.2	332.0

FAA DAY — 1/3 OCTAVE BAND — 1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	65.0	66.0	68.2	69.1	70.0	71.4	73.7	76.8	79.9	81.6	80.7
63	67.6	69.1	71.2	71.9	73.6	75.0	78.0	80.1	83.6	85.2	84.3
80	70.4	70.8	72.3	73.3	74.2	75.7	78.2	81.4	86.7	88.2	84.4
100	72.7	72.6	74.2	75.4	76.0	77.9	80.7	84.7	88.5	89.4	83.0
125	72.0	74.2	74.6	76.4	77.4	78.4	81.0	86.0	90.2	90.5	85.5
160	73.2	74.5	75.6	77.0	78.7	80.7	83.2	88.6	91.0	90.5	84.3
200	73.8	75.7	77.4	78.3	80.2	81.5	84.0	88.7	92.6	90.6	84.0
250	74.6	76.5	77.7	76.5	80.0	81.0	84.1	88.0	91.6	90.7	85.1
315	74.0	75.0	76.7	77.7	79.3	81.3	84.0	87.6	89.6	88.4	82.7
400	72.3	74.9	75.7	77.0	79.2	81.5	83.9	86.3	88.6	86.2	79.6
500	71.4	73.2	75.2	76.7	78.5	81.0	83.6	85.6	85.6	83.2	76.1
630	70.6	72.0	74.0	76.1	76.2	80.8	83.2	83.7	83.5	79.3	71.4
800	70.0	71.5	73.4	75.2	77.2	79.7	81.7	82.6	80.0	75.3	66.3
1000	68.7	70.6	72.7	74.2	76.4	78.5	80.6	79.8	77.9	71.0	61.0
1250	66.0	69.4	71.5	73.2	75.1	77.5	78.9	77.7	75.6	68.4	57.3
1600	65.6	67.9	70.2	71.8	73.4	75.7	76.6	74.0	71.3	64.4	52.7
2000	63.4	66.0	68.4	69.9	71.0	73.7	74.2	72.6	67.3	60.6	47.7
2500	60.9	63.9	66.7	68.6	69.5	71.4	71.4	68.7	63.9	56.2	41.4
3150	57.2	60.7	63.4	65.2	66.5	67.9	67.6	64.8	59.2	50.7	34.1
4000	53.6	57.9	60.5	62.4	63.6	64.5	64.7	60.4	54.9	44.7	27.0
5000	50.9	55.6	58.5	60.2	61.5	62.0	61.4	57.0	51.7	41.6	23.6
6300	47.1	52.1	55.4	56.9	57.5	58.2	57.1	53.6	46.7	36.3	16.3
8000	42.7	46.4	49.4	52.0	53.0	53.2	52.1	49.2	41.3	31.4	9.9
10000	35.0	37.0	41.4	44.7	44.6	44.1	47.0	46.1	31.3	10.0	0.0
OASPL	83.6	85.2	86.7	88.0	89.6	91.6	93.9	96.9	99.8	99.0	93.9
PNL	89.3	91.5	93.5	95.6	96.6	98.5	100.3	101.7	103.2	101.3	94.0

400. SIDELINE

PNL	101.6	103.9	105.9	107.5	109.1	111.0	112.2	113.3	114.5	112.5	106.4

2000. SIDELINE

PNL	83.1	85.3	87.1	88.6	90.3	92.3	94.2	95.8	97.5	95.5	88.9

4000. SIDELINE

PNL	79.0	76.0	77.8	79.3	81.0	83.0	84.9	87.6	89.2	87.6	79.6

6000. SIDELINE

PNL	69.9	70.2	73.9	73.3	75.1	77.0	79.9	81.5	85.9	81.3	73.2

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Reference Exhaust System Without Engine Secondary Flow Simulation; Configuration 2Au; Condition 5506

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 705307 TEST DATE 11/03/76 SCALE RATIO 7.0/1 RUN NUMBER 20655 CONDITION 5506

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		1.06	1.79		1.06	1.79	THRUST,IDL	LB			N		
TEMP	(R)	1465.0	674.0	(K)	813.9	374.4	THRUST,MEA	LB	0.0		N	0.0	
RHO	LB/FT3	0.032	0.070	KG/M3	0.512	1.119	AREA (MOD)	SQFT			SQM		
VEL	FPS	1700.2	1115.0	M/S	518.2	339.9	W (MODEL)	LB/S	3.1	2.9	KG/S	1.4	1.3

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS RAW CORRECTED SPL - (MODEL)

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PWL 60-120
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	79.6	82.6	84.7	85.3	85.6	86.4	87.9	90.9	92.6	96.2	100.3	112.7
.125	81.6	85.5	85.2	85.3	87.7	88.5	87.8	91.4	95.4	98.3	100.9	114.2
.160	86.2	88.6	86.8	86.5	85.7	86.5	81.6	90.7	96.4	100.7	103.7	115.0
.200	85.7	84.9	86.8	88.1	89.5	90.1	92.6	94.9	100.6	104.9	106.9	117.6
.250	86.2	86.9	88.2	89.0	90.6	91.4	93.9	97.7	103.0	107.1	109.1	121.6
.315	88.6	88.5	90.0	91.2	92.0	94.2	96.6	101.3	105.9	109.8	112.5	124.5
.400	90.8	91.7	93.2	94.6	95.8	98.6	100.2	104.6	109.6	113.4	116.0	126.1
.500	93.6	93.3	94.3	95.2	96.2	98.3	101.6	106.3	112.7	116.3	115.9	130.2
.630	96.0	95.6	96.2	97.6	98.3	100.4	104.2	109.4	114.8	117.9	119.8	131.7
.800	95.5	96.6	96.8	98.5	99.7	103.1	104.6	111.6	116.7	118.9	117.4	133.2
1.00	96.8	97.4	97.9	99.3	101.1	103.6	107.0	113.0	118.1	119.1	116.5	134.1
1.25	97.3	98.4	99.6	100.6	102.5	104.3	107.8	114.0	119.2	119.3	117.6	134.6
1.60	98.4	99.4	100.0	100.8	102.5	104.9	108.0	113.5	118.4	119.4	117.7	134.9
2.00	98.3	98.3	99.3	100.5	102.3	104.8	108.3	112.9	117.5	118.5	116.3	132.7
2.50	96.9	97.7	98.8	100.3	102.3	105.6	108.6	112.3	118.1	116.5	113.8	132.4
3.15	96.1	97.0	98.4	99.9	101.9	105.0	108.3	111.2	114.2	114.2	111.1	130.0
4.00	95.4	96.8	98.1	99.6	101.8	104.9	108.1	110.2	112.2	111.1	107.3	129.6
5.00	95.1	95.8	97.4	99.0	101.2	104.5	107.2	108.9	110.1	107.6	105.8	127.6
6.30	94.4	95.5	97.0	98.4	100.8	103.6	106.6	107.5	108.0	104.9	99.6	126.2
8.00	92.9	94.8	96.4	98.2	100.2	103.2	105.6	106.2	105.8	102.3	97.6	124.4
10.0	91.9	94.0	95.4	97.2	99.2	102.2	103.9	104.5	103.1	99.9	94.5	122.2
12.5	91.4	92.9	94.8	96.3	98.3	100.9	102.8	102.1	100.9	97.9	92.0	121.7
16.0	90.6	91.6	93.5	95.3	97.1	99.8	100.9	100.4	98.9	95.7	89.4	120.2
20.0	87.9	90.2	92.6	93.7	95.3	97.5	98.6	97.9	96.4	93.0	86.3	118.0
25.0	86.2	89.0	90.6	92.3	94.1	95.7	96.9	95.9	94.5	90.6	84.8	116.3
31.5	84.5	86.9	89.4	90.7	92.7	94.0	94.6	94.1	92.5	89.2	84.2	114.6
40.0	82.7	85.1	87.6	89.2	90.6	92.5	93.3	92.6	91.8	89.0	84.4	113.0
50.0	80.8	82.6	85.1	86.3	88.5	89.9	90.9	91.2	90.4	90.1	87.5	111.2
63.0	78.3	80.3	82.4	84.3	85.7	86.8	88.3	89.8	90.2	90.6	88.6	109.0
80.0	75.4	77.6	79.5	81.0	83.4	84.3	85.4	89.2	90.1	91.1	89.4	106.4
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
												OAPWL = 143.5
LSPL	106.6	108.9	110.6	111.4	113.2	115.7	118.7	122.6	127.0	128.2	126.5	

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 705307 TEST DATE 11/03/76 SCALE RATIO 7.0/1 RUN NUMBER 20655 CONDITION 5506

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	149.9	145.1	KG/S	68.0	65.9
P.R.		1.06	1.79		1.06	1.79	THRUST,IDL	LB			N		
TEMP	(R)	1465.0	674.0	(K)	813.9	374.4	THRUST,MEA	LB	0.0		N	0.0	
RHO	LB/FT3	0.032	0.070	KG/M3	0.512	1.119	AREA (MOD)	SQFT			SQM		
VEL	FPS	1700.2	1115.0	M/S	518.2	339.9	W (MODEL)	LB/S	3.1	2.9	KG/S	1.4	1.3

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	66.1	66.7	68.6	69.9	70.6	72.4	74.1	77.7	80.7	82.6	81.7
63	68.3	69.9	71.6	72.7	74.4	76.8	77.7	81.0	84.4	86.0	85.2
80	71.1	71.5	72.9	73.9	74.6	76.5	79.1	82.7	87.5	88.9	85.1
100	73.3	73.3	74.7	76.2	76.8	78.5	81.5	85.6	89.4	90.3	83.6
125	72.8	74.7	75.3	77.1	78.2	79.2	81.9	87.2	91.3	91.3	86.2
160	74.6	75.3	76.3	77.0	79.5	81.5	84.2	89.1	92.6	91.2	85.0
200	74.5	76.3	78.0	79.1	80.9	82.2	85.6	90.1	93.7	91.4	85.5
250	75.5	77.2	78.3	79.2	80.8	82.7	85.1	89.4	93.2	91.8	85.9
315	75.1	75.9	77.3	78.7	80.3	82.4	85.1	88.5	91.4	89.9	83.8
400	73.6	75.2	76.7	78.4	80.2	82.5	85.3	87.8	89.9	87.7	80.9
500	72.5	74.2	76.1	77.8	79.6	82.2	84.7	86.4	87.6	85.0	77.6
630	71.6	73.8	75.6	77.2	79.3	81.9	84.3	85.1	85.3	81.4	73.1
800	70.9	72.4	74.5	76.3	78.3	80.9	83.0	83.4	82.6	77.2	68.5
1000	69.7	71.7	73.7	75.2	77.5	79.8	81.9	81.4	79.8	73.6	63.8
1250	67.7	70.5	72.6	74.6	76.4	78.9	80.4	79.5	76.9	70.1	59.0
1600	65.8	68.9	70.9	72.9	74.7	77.1	77.8	76.6	73.0	66.1	54.2
2000	64.4	67.0	69.5	71.2	73.0	75.0	75.8	73.4	69.6	62.5	49.3
2500	61.8	64.8	67.2	69.2	70.0	72.0	72.7	70.3	65.9	58.1	43.4
3150	58.2	61.9	64.4	66.4	67.7	69.2	68.9	66.1	61.3	52.6	36.0
4000	54.5	58.0	61.3	63.3	64.8	65.5	65.2	61.0	56.0	46.4	28.9
5000	52.0	56.1	59.5	61.1	62.6	63.2	62.5	59.0	53.3	43.3	25.4
6300	47.8	52.1	55.7	57.6	58.7	59.5	58.4	54.6	48.2	38.1	17.9
8000	43.6	47.2	50.7	52.3	54.1	54.3	53.1	49.8	43.2	33.2	11.7
10000	33.7	38.7	42.4	44.8	45.7	45.2	43.7	40.5	33.2	20.8	0.0
OASPL	84.4	86.0	87.5	88.9	90.6	92.1	95.0	98.2	101.2	100.0	94.7
PNL	90.3	92.3	94.4	96.0	97.8	99.7	101.6	103.2	104.8	102.5	95.9
400. SIDELINE											
PNL	102.5	104.8	106.8	108.5	110.2	112.2	113.5	114.7	116.1	113.0	107.5
2000. SIDELINE											
PNL	84.0	86.1	88.0	89.7	91.4	93.4	95.4	97.2	99.0	96.7	89.9
4000. SIDELINE											
PNL	74.7	76.9	78.6	80.4	82.1	84.1	86.2	88.4	90.6	88.2	80.6
6000. SIDELINE											
PNL	68.8	71.0	72.7	74.4	76.1	78.0	80.2	82.9	85.2	82.5	74.1

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Reference Exhaust System Without Engine Secondary Flow Simulation; Configuration 2Au; Condition 5507

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID TG5367 TEST DATE 11/03/76 SCALE RATIO 7.0/1 RUN NUMBER 2Q855 CONDITION 5507

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		1.99	1.90		1.99	1.90	THRUST,IDL LB			N		
TEMP	(R)	1525.0	681.0	(K)	847.2	378.3	THRUST,MEA LB		0.0	N		0.0
RHO	LB/FT3	0.031	0.070	KG/M3	0.500	1.125	AREA (MOD) SQFT			SQM		
VEL	FPS	1019.3	1169.4	M/S	954.5	356.4	W (MODEL) LB/S	3.3	3.0	KG/S	1.5	1.4

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS RAW CORRECTED SPL - (MODEL)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	POWER (W-1/M)
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.125	83.7	87.3	87.1	86.8	84.5	90.2	89.3	92.6	96.9	99.9	102.8	[illegible]
.160	86.1	90.0	88.6	88.4	87.5	88.3	90.6	92.5	97.9	102.3	105.8	[illegible]
.200	86.6	86.5	88.5	89.0	91.4	92.1	94.4	96.6	102.4	107.1	109.1	[illegible]
.250	88.1	88.7	90.1	91.7	92.6	93.4	95.5	99.2	104.6	109.2	111.2	[illegible]
.315	90.1	90.2	91.9	92.9	94.1	96.1	98.3	103.6	107.8	111.8	114.4	[illegible]
.400	92.6	93.4	94.8	95.8	97.3	100.3	101.9	106.6	111.7	115.5	117.9	[illegible]
.500	95.2	94.7	96.0	97.0	97.9	100.1	103.1	108.3	114.0	118.3	117.7	[illegible]
.630	97.4	96.5	97.9	99.2	100.6	102.1	105.9	111.6	116.9	119.8	116.5	[illegible]
.800	97.6	98.1	98.3	100.1	101.4	102.7	106.6	113.2	119.0	120.8	119.0	[illegible]
1.00	98.2	98.7	99.3	100.9	102.6	105.2	109.0	115.6	120.6	121.0	117.9	[illegible]
1.25	98.7	99.7	101.0	102.1	103.9	106.0	109.8	118.9	121.9	121.1	118.6	[illegible]
1.60	99.4	100.6	101.6	102.2	104.0	106.6	110.1	118.8	122.6	121.9	118.7	[illegible]
2.00	99.7	99.9	101.2	102.7	104.3	106.6	110.6	116.4	121.1	121.6	117.8	[illegible]
2.50	98.7	99.5	100.8	102.2	104.4	107.0	[illegible]	[illegible]	120.6	119.3	115.9	[illegible]
3.15	98.1	98.9	100.5	101.9	103.9	107.2	110.9	114.7	118.5	116.9	115.4	[illegible]
4.00	97.9	98.8	100.3	101.5	104.0	107.1	110.8	113.7	116.7	114.4	116.8	[illegible]
5.00	97.3	98.1	99.8	101.2	103.5	106.8	110.6	112.5	114.2	111.8	107.0	[illegible]
6.30	96.9	97.9	99.3	100.8	103.2	106.1	109.3	111.3	112.1	109.6	106.0	[illegible]
8.00	95.3	97.2	99.0	100.4	102.0	105.9	108.4	110.1	110.8	106.5	101.2	[illegible]
10.0	94.1	96.2	98.2	99.7	101.8	104.9	107.6	108.7	107.9	104.6	98.2	[illegible]
12.5	93.5	95.1	97.4	98.9	101.6	103.8	105.6	106.2	105.7	107.0	95.6	[illegible]
16.0	92.2	94.1	96.1	97.9	99.9	102.7	104.0	104.1	103.5	100.0	93.0	[illegible]
20.0	90.1	92.4	94.5	96.3	98.1	100.6	101.8	101.5	101.6	97.4	90.1	[illegible]
25.0	88.5	91.2	93.3	95.0	96.9	98.9	100.1	99.4	99.2	95.4	87.0	[illegible]
31.5	86.7	89.0	92.0	93.6	95.4	97.1	98.3	97.8	97.0	93.2	88.0	[illegible]
40.0	85.6	87.4	90.4	92.1	93.5	95.4	96.3	96.2	95.2	92.6	85.9	[illegible]
50.0	83.1	85.7	87.9	89.0	91.1	92.9	94.0	94.3	93.0	91.7	88.6	[illegible]
63.0	80.6	82.5	85.0	87.0	88.5	89.6	91.2	92.1	92.3	91.7	89.2	[illegible]
80.0	77.7	79.7	82.2	83.5	85.9	87.6	88.5	90.8	91.7	91.5	89.6	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

OAPWL = 146.1

OASPL	109.7	110.6	112.6	113.3	115.2	117.9	121.1	125.0	130.1	130.3	126.1

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID TG5367 TEST DATE 11/03/76 SCALE RATIO 7.0/1 RUN NUMBER 2Q855 CONDITION 5507

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM	0.273	0.226	MASS FLOW LB/S	161.2	148.5	KG/S	73.1	67.3
P.R.		1.99	1.90		1.99	1.90	THRUST,IDL LB			N		
TEMP	(R)	1525.0	681.0	(K)	847.2	378.3	THRUST,MEA LB		0.0	N		0.0
RHO	LB/FT3	0.031	0.070	KG/M3	0.500	1.125	AREA (MOD) SQFT			SQM		
VEL	FPS	1019.3	1169.4	M/S	954.5	356.4	W (MODEL) LB/S	3.3	3.0	KG/S	1.5	1.4

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	67.6	68.9	70.5	71.6	72.7	74.3	75.8	79.4	82.6	84.4	83.6
63	70.1	71.6	73.4	74.5	75.9	78.5	79.4	83.0	86.5	88.1	87.1
80	72.7	72.9	74.6	75.7	76.5	76.3	80.6	84.7	89.6	90.9	88.9
100	74.7	74.6	76.4	77.8	78.5	80.2	83.2	87.8	91.5	92.2	89.3
125	74.3	76.2	76.8	78.7	79.9	80.6	83.9	89.4	93.6	93.2	87.8
160	75.4	76.6	77.7	79.4	81.6	83.1	86.2	91.7	95.1	93.1	86.4
200	75.9	77.6	79.4	80.6	82.3	83.9	87.0	93.6	96.4	93.2	86.5
250	76.5	78.4	79.9	80.6	82.3	84.4	87.2	92.7	96.3	93.0	86.9
315	76.5	77.5	79.2	80.4	82.3	84.2	87.4	92.6	95.0	92.4	85.3
400	75.4	77.0	78.7	80.3	82.3	84.5	87.5	91.3	93.8	90.5	83.6
500	74.5	76.1	78.2	79.8	81.6	84.4	87.3	89.9	91.9	87.7	79.9
630	74.1	75.8	77.8	79.1	81.5	84.1	87.0	88.6	89.8	84.7	76.4
800	73.3	74.7	76.9	78.5	80.6	83.2	85.8	87.6	86.7	81.2	72.3
1000	72.2	74.1	76.0	77.6	79.9	82.3	84.6	85.2	83.9	77.7	67.4
1250	70.1	72.9	75.2	76.8	79.0	81.6	83.2	83.4	81.2	74.3	63.2
1600	68.8	71.1	73.7	75.4	77.3	79.8	80.9	80.5	77.8	70.2	57.9
2000	68.5	69.2	72.1	73.8	75.7	77.9	78.6	77.5	74.4	66.6	52.9
2500	64.8	67.1	69.8	71.0	73.6	75.7	75.0	74.0	70.5	62.4	47.0
3150	60.4	64.1	66.9	69.6	70.5	72.3	72.1	69.7	65.9	57.0	39.8
4000	58.0	61.0	64.0	66.0	67.6	68.7	68.4	65.3	61.3	50.9	31.9
5000	54.2	58.2	62.1	64.6	65.5	66.3	[illegible]	62.7	57.8	47.8	27.0
6300	50.1	54.4	58.5	60.5	61.6	62.4	61.4	58.2	52.4	41.1	19.4
8000	45.3	49.6	53.5	55.0	56.7	57.3	56.2	52.9	46.8	34.8	12.2
10000	36.6	46.9	45.6	47.5	48.5	48.6	46.6	43.0	35.3	21.7	0.0
OASPL	86.1	87.6	89.4	90.8	92.5	94.7	97.3	101.2	104.2	102.2	96.3
PNL	92.2	94.3	96.7	98.3	100.2	102.2	104.1	106.6	108.7	105.0	97.6

400. SIDELINE

PNL	104.5	106.6	109.2	110.9	112.7	114.8	116.2	118.1	119.5	116.3	109.2

2000. SIDELINE

PNL	85.9	88.0	90.1	91.8	93.6	95.7	97.9	100.5	102.4	99.2	91.6

4000. SIDELINE

PNL	76.5	78.6	80.8	82.4	84.2	86.3	88.6	91.7	93.9	90.5	82.2

6000. SIDELINE

PNL	70.5	72.7	74.7	76.3	78.2	80.2	82.5	86.1	88.3	84.8	75.7

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Reference Exhaust System Without Engine Secondary Flow Simulation; Configuration 2Au; Condition 5508

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 705307 TEST DATE 11/03/76 SCALE RATIO 7.0/1 RUN NUMBER 20055 CONDITION 5508

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		2.05	1.91		2.05	1.91	THRUST,IDL	LB			N		
TEMP	(R)	1574.0	680.0	(K)	874.6	382.2	THRUST,MEA	LB	0.0		N	0.0	
RHO	LB/FT3	0.030	0.070	KG/M3	0.480	1.110	AREA (MOD)	SQFT			SQM		
VEL	FPS	1886.2	1183.5	M/S	574.9	360.7	W (MODEL)	LB/S	3.3	3.1	KG/S	1.5	1.4

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (MODEL)

BAND CENTER FREQ (KHZ) — MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	POWER 60-170
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	84.2	85.3	87.3	87.7	87.8	86.7	89.0	92.5	94.5	98.6	102.9	[illegible]
.125	86.2	87.2	87.3	87.7	90.2	90.7	89.2	93.1	97.2	100.6	103.1	[illegible]
.160	88.7	90.5	89.1	89.1	88.6	88.7	90.8	92.7	98.6	102.7	105.8	[illegible]
.200	87.5	87.0	89.1	90.6	92.0	92.7	94.6	96.9	102.9	107.5	109.3	[illegible]
.250	88.0	89.3	90.5	92.3	93.6	93.9	95.9	99.0	104.9	109.7	111.7	[illegible]
.315	90.0	90.6	92.3	93.3	94.3	96.2	98.6	103.0	108.1	112.2	114.7	[illegible]
.400	93.5	94.0	95.3	95.9	98.0	100.7	102.1	107.0	112.3	116.1	118.6	[illegible]
.500	95.8	95.1	96.3	97.1	98.1	100.3	103.6	108.7	115.1	116.7	117.8	[illegible]
.630	97.0	96.0	98.3	99.7	100.5	102.6	106.3	112.3	117.6	120.2	116.7	[illegible]
.800	97.3	98.3	98.7	100.5	101.7	103.1	106.0	113.0	119.6	121.6	119.1	[illegible]
1.00	98.0	99.0	99.7	101.6	103.0	105.7	109.3	116.2	121.0	121.6	117.8	[illegible]
1.25	99.1	100.6	101.3	102.6	104.6	106.6	110.6	117.6	122.2	121.3	118.2	[illegible]
1.60	99.7	100.9	101.7	102.6	104.5	106.9	110.6	117.7	122.4	122.1	118.7	[illegible]
2.00	100.0	100.2	101.5	102.6	104.7	107.2	110.8	117.3	121.7	121.3	117.8	[illegible]
2.50	99.2	100.0	101.1	102.0	104.9	107.7	111.2	116.8	120.7	119.8	118.1	[illegible]
3.15	98.7	99.5	101.6	102.6	104.6	107.7	111.2	115.5	119.3	117.2	113.9	[illegible]
4.00	98.6	99.3	100.9	102.5	104.7	107.8	111.2	114.5	117.6	115.0	111.0	[illegible]
5.00	98.1	98.6	100.2	101.7	104.1	107.2	110.3	113.3	114.9	112.3	107.9	[illegible]
6.30	97.5	98.5	100.1	101.6	103.9	106.8	110.6	112.2	113.6	109.0	104.5	[illegible]
8.00	95.9	97.0	99.6	101.1	103.5	106.4	108.7	110.7	110.9	107.1	101.7	[illegible]
10.0	94.7	96.0	98.7	100.5	102.6	105.5	107.6	109.6	108.7	104.8	99.6	[illegible]
12.5	94.1	95.7	97.0	99.5	101.7	104.9	106.2	107.0	106.6	102.8	96.1	[illegible]
16.0	92.6	94.7	96.7	98.6	100.6	103.6	104.6	105.1	104.8	100.9	93.7	[illegible]
20.0	90.7	93.6	95.2	97.1	99.0	101.2	102.3	102.3	102.6	98.6	90.8	[illegible]
25.0	89.3	91.8	93.8	95.7	97.6	99.0	100.6	100.7	100.7	96.0	88.7	[illegible]
31.5	87.6	89.5	92.5	94.1	96.0	97.5	96.7	98.5	98.2	94.3	87.6	[illegible]
40.0	86.1	88.0	90.9	92.7	94.1	96.1	96.9	96.8	96.7	93.3	87.6	[illegible]
50.0	84.3	85.9	88.3	89.9	92.6	93.7	94.6	95.0	95.0	93.0	89.0	[illegible]
63.0	82.5	83.6	85.7	87.9	89.2	90.7	92.0	92.9	94.0	93.3	91.0	[illegible]
80.0	80.6	80.6	82.9	84.7	86.9	88.7	89.5	91.4	92.3	93.5	91.8	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	110.2	111.1	112.6	113.9	115.8	118.6	121.5	126.5	130.6	136.7	128.3	

OAPWL = 146.0

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 705307 TEST DATE 11/03/76 SCALE RATIO 7.0/1 RUN NUMBER 20055 CONDITION 5508

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	163.7	151.6	KG/S	74.2	68.7
P.R.		2.05	1.91		2.05	1.91	THRUST,IDL	LB			N		
TEMP	(R)	1574.0	680.0	(K)	874.6	382.2	THRUST,MEA	LB	0.0		N	0.0	
RHO	LB/FT3	0.030	0.070	KG/M3	0.480	1.110	AREA (MOD)	SQFT			SQM		
VEL	FPS	1886.2	1183.5	M/S	574.9	360.7	W (MODEL)	LB/S	3.3	3.1	KG/S	1.5	1.4

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
63	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
80	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
100	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
125	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
160	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
200	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
315	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
400	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
630	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
800	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1600	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3150	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6300	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OASPL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PNL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
400. SIDELINE PNL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2000. SIDELINE PNL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4000. SIDELINE PNL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6400. SIDELINE PNL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

… System Without Engine Secondary Flow Simulation; Configuration 2Au; Condition 5509

a.) Model Data Measured At 15 Ft. Radius

STAND E2U6 RIG ID 705307 TEST DATE 11/03/76 SCALE RATIO 7.0/1 RUN NUMBER 20055 CONDITION 5509

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		2.11	1.90		2.11	1.90	THRUST,IDL	LB			N		
TEMP	(R)	1601.0	698.0	(K)	889.4	387.8	THRUST,MEA	LB	0.0		N		0.0
RHO	LB/FT3	0.030	0.069	KG/M3	0.482	1.111	AREA (MOD)	SQFT			SQM		
VEL	FPS	1935.0	1221.0	M/S	589.8	372.4	W (MODEL)	LB/S	3.5	3.6	KG/S	1.6	1.6

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (MODEL)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	POWER DB-LEV
					MICROPHONE ANGLES IN DEGREES							
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	82.0	85.9	87.7	88.3	88.3	89.2	90.3	93.1	95.0	99.1	103.5	115.5
.125	86.9	88.4	87.9	88.5	91.1	91.7	90.3	94.2	98.4	101.5	104.1	117.2
.160	89.4	91.1	89.9	89.5	88.0	89.0	91.6	93.3	99.2	103.6	106.9	120.7
.200	87.9	87.9	89.0	91.2	92.4	92.9	95.2	97.5	103.4	107.0	109.9	122.3
.250	89.7	89.0	91.7	92.0	93.6	94.3	96.0	100.3	105.7	110.3	112.1	124.6
.315	95.6	92.2	93.1	94.2	95.2	97.2	99.3	104.3	108.0	113.1	115.6	127.0
.400	93.9	94.5	95.0	96.7	98.4	101.2	102.6	107.4	112.7	116.6	118.0	[illegible]
.500	90.5	93.6	96.0	97.9	98.7	101.0	104.0	109.3	115.9	119.4	118.5	132.6
.630	98.4	97.3	98.9	100.2	101.6	103.2	106.9	113.1	118.3	120.9	117.2	134.9
.800	98.6	98.9	99.5	101.2	102.5	103.6	107.6	114.7	120.6	121.7	119.0	136.2
1.00	99.4	99.7	100.3	102.6	103.7	106.5	110.1	117.0	[illegible]	121.9	116.4	137.3
1.25	99.6	100.7	101.9	102.0	103.2	107.3	111.1	118.6	122.9	121.6	118.5	138.1
1.60	100.4	101.5	102.2	103.1	105.1	107.0	111.6	119.6	123.4	127.0	119.6	138.7
2.00	100.0	100.7	101.9	103.2	105.5	107.9	111.8	118.6	123.6	122.0	118.0	136.2
2.50	99.9	100.6	101.8	103.6	105.6	106.5	112.2	118.1	122.1	120.6	116.5	137.4
3.15	99.6	100.5	101.0	103.7	105.4	108.7	112.7	117.0	120.9	118.3	115.0	130.1
4.00	100.6	100.6	101.0	103.2	105.5	108.0	112.4	115.9	119.1	115.9	111.9	138.7
5.00	100.1	100.2	101.6	104.0	105.2	108.4	111.6	114.9	116.7	113.6	109.1	133.1
6.30	99.7	100.0	101.6	102.5	104.9	108.0	111.0	113.0	114.5	112.3	106.0	131.0
8.00	97.2	99.0	100.9	102.7	104.0	107.7	110.2	112.3	112.7	108.9	103.5	130.5
10.0	95.9	96.6	99.9	101.7	104.0	106.9	108.9	110.7	110.1	106.5	100.0	129.0
12.5	95.1	96.7	99.1	100.6	103.1	105.9	107.6	108.7	108.6	104.5	97.9	127.4
16.0	93.9	95.7	97.9	99.0	102.0	105.1	106.1	106.9	106.9	102.0	95.4	126.6
20.0	91.0	94.6	96.3	98.2	100.2	103.0	103.6	104.6	104.5	100.5	92.7	123.6
25.0	90.0	92.9	95.0	96.0	98.9	101.2	102.2	102.2	103.1	98.6	90.6	[illegible]
31.5	88.2	90.0	93.7	95.2	97.2	99.2	100.2	100.4	101.5	96.6	89.0	120.2
40.0	86.6	87.9	92.1	93.7	95.5	97.5	98.4	98.8	99.2	95.3	86.2	118.5
50.0	84.7	86.0	89.3	90.5	93.1	94.9	96.2	96.8	97.1	94.5	86.3	[illegible]
63.0	82.3	84.1	86.6	88.5	90.3	91.6	93.4	94.6	95.7	94.1	91.7	119.2
80.0	79.3	81.3	83.6	85.0	87.6	89.1	91.1	92.0	94.6	93.0	91.9	117.4
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	111.2	113.9	115.3	116.7	118.7	119.5	122.6	127.0	131.0	131.4	128.0	OAPWL = 147.0

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND E2U6 RIG ID 705307 TEST DATE 11/03/76 SCALE RATIO 7.0/1 RUN NUMBER 20055 CONDITION 5509

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	170.0	149.0	KG/S	77.1	67.6
P.R.		2.11	1.90		2.11	1.90	THRUST,IDL	LB			N		
TEMP	(R)	1601.0	698.0	(K)	889.4	387.6	THRUST,MEA	LB	0.0		N		0.0
RHO	LB/FT3	0.030	0.069	KG/M3	0.482	1.111	AREA (MOD)	SQFT			SQM		
VEL	FPS	1935.0	1221.0	M/S	589.8	372.4	W (MODEL)	LB/S	3.5	3.6	KG/S	1.6	1.6

FAA DAY — 1/3 OCTAVE BAND — 1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	68.0	69.4	71.7	72.9	73.8	75.4	76.8	80.7	83.6	85.7	84.0
63	71.4	72.7	74.6	75.4	77.6	79.4	80.1	83.0	87.5	89.2	88.0
80	74.0	73.0	75.4	76.6	77.3	79.2	81.5	85.7	90.7	92.6	87.7
100	75.7	75.4	77.4	78.0	79.5	81.3	84.2	89.3	92.0	[illegible]	86.6
125	75.5	77.6	77.8	79.8	80.0	81.9	84.9	90.9	94.0	94.1	88.4
160	76.0	77.6	78.7	80.5	82.1	84.4	87.3	93.1	96.5	[illegible]	86.9
200	76.8	78.6	80.3	81.3	83.6	85.2	88.3	94.7	97.6	93.4	87.0
250	77.5	79.1	80.5	81.5	83.4	85.6	88.7	94.9	97.7	94.5	87.2
315	77.4	78.3	79.9	81.4	83.3	85.9	88.6	94.2	96.9	93.4	85.5
400	76.6	76.1	79.7	81.7	83.5	86.0	88.9	93.6	95.9	91.8	83.6
500	76.2	77.5	79.5	81.1	83.1	85.9	88.6	92.2	94.3	89.1	81.5
630	76.2	77.6	79.3	80.8	83.6	85.6	88.6	90.8	92.2	86.2	77.7
800	75.9	76.6	78.7	80.1	82.3	85.8	87.4	89.4	89.2	83.2	73.8
1000	74.5	76.2	78.3	79.3	81.6	84.2	86.3	87.7	86.3	80.0	69.4
1250	72.6	74.7	77.1	79.1	81.6	83.4	85.0	85.6	[illegible]	76.7	65.5
1600	69.0	72.9	75.4	77.4	79.5	81.0	82.0	83.4	[illegible]	71.9	60.5
2000	68.1	70.8	73.8	75.5	77.6	80.0	80.6	80.0	[illegible]	69.1	55.7
2500	65.7	68.7	71.6	73.8	75.7	78.1	77.9	76.8	73.9	[illegible]	[illegible]
3150	62.1	65.7	68.7	70.9	72.6	74.7	74.1	72.6	69.4	59.9	42.4
4000	58.3	62.7	65.7	67.8	69.6	71.0	70.5	68.1	65.2	53.8	34.5
5000	55.7	60.0	63.8	65.6	67.3	68.4	67.7	65.3	61.9	50.9	30.2
6300	51.7	55.9	60.2	62.1	63.6	64.5	63.5	60.0	56.4	[illegible]	21.7
8000	46.9	51.2	[illegible]	56.5	56.7	59.3	58.4	55.4	49.9	37.6	14.5
10000	37.7	42.5	[illegible]	49.0	50.3	56.2	48.0	45.1	38.7	24.1	0.0
OASPL	87.5	88.8	90.5	92.0	93.9	96.2	98.7	103.2	105.7	103.1	96.9
PNL	93.7	95.8	98.2	100.6	101.9	104.1	105.6	108.8	110.1	106.1	98.3
400. SIDELINE PNL	106.1	108.3	110.7	112.5	114.5	116.8	118.0	120.3	121.7	117.7	110.1
2000. SIDELINE PNL	87.4	89.3	91.4	93.2	95.1	97.3	99.4	102.7	104.2	100.3	92.2
4000. SIDELINE PNL	78.0	79.9	82.0	83.8	85.7	87.9	90.1	93.0	95.5	91.5	82.8
6000. SIDELINE PNL	71.9	73.9	75.9	77.8	79.6	81.7	84.0	88.2	89.9	85.0	76.3

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Reference Exhaust System Without Engine Secondary Flow Simulation; Configuration 2Au; Condition 5510

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 705307 TEST DATE 11/03/76 SCALE RATIO 7.0/1 RUN NUMBER 2U055 CONDITION 5510

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		2.15	2.01		2.15	2.01	THRUST,IDL	LB			N		
TEMP	(R)	1600.0	701.0	(K)	893.3	389.4	THRUST,MEA	LB	0.0		N	0.0	
RHO	LB/FT3	0.030	0.069	KG/M3	0.482	1.110	AREA (MOD)	SQFT			SQM		
VEL	FPS	1956.2	1234.4	M/S	596.0	376.3	W (MODEL)	LB/S	3.5	3.0	KG/S	1.6	1.4

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (MODEL)

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	POWER 1E-12W
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	83.0	86.1	86.1	88.5	89.4	89.3	90.8	93.5	95.5	99.6	103.7	1[illegible]
.125	84.0	88.5	88.0	88.7	91.1	91.5	90.4	94.1	98.4	101.3	104.1	117.2
.160	90.1	91.4	90.0	89.0	89.1	89.7	91.6	93.5	99.4	103.8	106.9	118.9
.200	88.2	88.2	89.9	91.2	92.3	93.4	95.6	98.6	103.7	108.2	110.2	122.6
.250	89.7	89.9	91.5	93.0	93.6	94.0	97.0	100.6	105.9	110.6	112.4	124.6
.315	91.3	91.5	93.2	94.2	95.2	97.2	99.6	104.4	109.1	113.2	11[illegible].8	127.6
.400	94.3	94.8	96.1	96.7	98.7	101.5	103.6	107.9	113.2	116.9	119.2	131.5
.500	96.5	95.9	97.1	98.1	99.0	101.3	104.3	109.6	116.2	119.7	118.0	133.5
.630	98.5	97.6	99.2	100.6	101.2	103.2	107.1	113.1	118.5	121.1	117.5	135.1
.800	98.2	99.2	99.6	101.5	102.6	104.6	107.8	114.9	120.3	122.1	114.9	136.5
1.00	99.6	99.9	100.5	102.2	103.9	106.6	110.4	117.4	122.1	122.2	110.7	137.6
1.25	99.6	100.6	102.2	103.2	105.3	107.3	111.2	119.1	123.4	124.2	110.7	136.5
1.60	100.5	101.6	102.4	103.4	105.2	107.9	111.0	119.2	123.7	122.0	119.2	138.9
2.00	100.6	101.0	102.2	103.5	105.5	108.1	117.1	119.1	123.4	122.2	110.2	138.6
2.50	100.1	101.6	102.3	103.7	105.9	108.8	112.6	118.4	122.7	120.8	116.7	137.8
3.15	100.3	100.8	102.2	103.7	105.8	109.0	112.7	117.8	121.4	118.0	115.2	136.6
4.00	100.7	101.2	102.2	103.6	105.4	109.0	112.7	116.6	119.6	116.2	112.4	135.2
5.00	100.9	101.1	102.0	103.1	105.6	108.7	112.0	115.4	117.3	113.9	109.6	13[illegible]
6.30	99.0	100.8	102.2	103.1	105.4	108.4	111.6	114.3	115.2	112.0	106.5	132.4
8.00	97.7	99.5	101.6	103.1	105.1	108.1	110.4	112.9	113.2	109.4	104.1	130.9
10.0	96.3	98.6	100.3	102.2	104.4	107.3	109.4	111.2	111.2	107.2	101.7	129.5
12.5	95.5	97.6	99.5	101.1	103.6	106.5	108.0	109.3	109.4	105.3	98.9	128.0
16.0	94.2	96.2	98.3	100.2	102.4	105.9	108.6	107.6	107.8	103.6	96.4	126.6
20.0	94.0	94.5	96.7	98.6	100.7	103.6	104.4	105.1	105.5	101.3	93.4	124.4
25.0	90.3	93.2	95.6	97.2	99.3	101.7	102.8	102.9	104.2	99.4	91.4	122.6
31.5	88.6	91.0	94.0	95.6	97.7	99.7	100.6	101.6	101.9	97.8	90.1	120.6
40.0	86.9	89.5	92.4	94.6	95.7	97.9	99.6	99.6	100.5	96.9	89.7	119.3
50.0	85.6	87.2	89.8	91.2	93.4	95.5	96.7	97.5	98.6	96.1	91.0	117.3
63.0	82.5	84.6	87.1	89.6	90.6	92.3	93.9	95.1	97.2	95.7	92.7	115.6
80.0	79.6	81.9	84.1	85.7	88.2	90.6	91.3	93.3	96.5	95.5	93.6	113.5
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	111.5	112.4	113.7	115.6	117.6	119.8	123.6	128.2	132.2	131.7	129.1	

OAPWL = 140.6

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 705307 TEST DATE 11/03/76 SCALE RATIO 7.0/1 RUN NUMBER 2U055 CONDITION 5510

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	173.0	149.0	KG/S	78.5	67.6
P.R.		2.15	2.01		2.15	2.01	THRUST,IDL	LB			N		
TEMP	(R)	1600.0	701.0	(K)	893.3	389.4	THRUST,MEA	LB	0.0		N	0.0	
RHO	LB/FT3	0.030	0.069	KG/M3	0.482	1.110	AREA (MOD)	SQFT			SQM		
VEL	FPS	1956.2	1234.4	M/S	596.0	376.3	W (MODEL)	LB/S	3.5	3.0	KG/S	1.6	1.4

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	68.8	69.7	71.8	72.4	73.8	75.4	77.1	80.8	83.9	85.8	85.0
63	71.8	73.0	74.7	75.4	77.3	79.7	80.5	84.3	88.6	89.5	88.4
80	74.0	74.1	75.7	76.0	77.6	79.5	81.0	86.0	91.6	92.3	88.6
100	75.8	75.7	77.7	79.2	79.7	81.3	84.4	89.3	93.1	93.5	86.3
125	75.5	77.3	78.1	80.1	81.1	82.1	85.1	91.1	94.9	94.5	88.7
160	76.0	77.8	78.9	80.7	82.3	84.5	87.6	93.5	96.6	94.3	87.2
200	77.0	78.7	80.6	81.7	83.7	85.2	88.4	95.2	97.9	94.3	87.2
250	77.6	79.4	80.7	81.8	83.5	85.7	88.9	95.1	98.8	94.7	87.4
315	77.6	78.6	80.2	81.7	83.5	85.7	88.9	94.7	97.3	93.6	85.7
400	76.8	78.5	80.2	81.8	83.8	86.3	89.3	93.9	96.5	92.0	83.8
500	76.7	78.0	79.9	81.6	83.5	86.2	89.1	92.8	94.8	89.6	81.7
630	76.9	78.2	79.7	81.2	83.3	86.0	88.9	91.5	92.7	86.5	78.2
800	76.7	77.7	79.1	80.4	82.7	85.3	87.8	89.9	89.8	83.5	74.3
1000	75.1	77.0	78.9	79.9	82.1	84.6	86.9	88.2	87.6	80.7	69.9
1250	72.5	75.2	77.6	79.5	81.3	83.8	85.2	86.2	84.3	77.2	66.1
1600	70.2	73.5	75.8	77.9	79.9	82.2	83.3	83.5	81.1	73.4	61.6
2000	68.5	71.5	74.2	76.0	78.3	80.6	81.0	80.6	78.1	69.9	56.2
2500	66.0	69.2	72.0	74.1	76.1	78.9	78.4	77.5	74.8	66.0	50.4
3150	62.3	66.2	69.1	71.3	73.1	75.3	74.7	73.3	70.4	60.9	43.1
4000	58.6	63.0	66.1	68.2	70.0	71.5	71.1	68.8	66.3	55.2	35.5
5000	56.1	60.2	64.1	66.0	67.8	68.9	68.1	65.9	62.7	51.9	31.3
6300	52.0	56.5	60.5	62.4	63.8	64.9	64.1	61.6	57.7	46.0	23.2
8000	47.2	51.6	55.4	57.2	59.0	59.9	58.9	56.1	51.6	39.2	16.0
10000	37.9	43.0	47.1	49.5	50.6	50.7	[illegible]	45.8	40.2	29.7	0.0
OASPL	87.8	89.2	90.9	92.4	94.2	96.4	99.1	103.6	106.1	103.6	97.2
PNL	98.0	98.5	98.6	100.4	102.3	104.6	108.0	109.2	110.7	108.5	98.6

400. SIDELINE											
PNL	108.5	108.8	111.1	112.9	114.8	117.3	118.4	120.8	122.2	118.1	110.4
2000. SIDELINE											
PNL	87.7	89.8	91.9	93.6	95.5	97.7	99.8	103.1	104.7	100.6	92.5
4000. SIDELINE											
PNL	78.3	80.4	82.4	84.1	86.8	88.2	90.4	94.2	95.9	91.8	83.1
6000. SIDELINE											
PNL	72.2	74.3	76.4	78.0	79.9	82.0	84.3	88.6	90.3	86.0	76.6

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Shallow Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 3A; Condition 5703

a.) Model Data Measured At 15 Ft. Radius

STAND A206 RIG ID 705307 TEST DATE 11/10/76 SCALE RATIO 7.0/1 RUN NUMBER 20057 CONDITION 5703

		PRIMARY	FAN		PRIMARY	FAN				
AREA	SQFT			SQM			MASS FLOW LB/S			
P.R.		1.42	1.47		1.42	1.47	THRUST,IDL LB			
TEMP	(R)	1305.0	623.0	(K)	725.0	346.1	THRUST,MEA LB			
RHO	LB/FT3	0.034	0.072	KG/M3	0.538	1.147	AREA (MOD) SQFT			
VEL	FPS	1227.3	885.4	M/S	374.1	269.9	W (MODEL) LB/S	2.1	2.7 KG/S	1.0

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (MODEL)

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	POWER DB-1.0
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	71.3	75.5	77.2	78.4	77.7	79.1	80.3	83.6	84.4	87.9	90.9	100.3
.125	74.6	79.1	78.2	78.0	78.0	81.6	80.3	83.6	87.2	89.7	93.1	105.9
.160	76.7	79.3	78.5	78.7	77.4	78.9	80.6	82.6	87.7	91.7	93.2	106.7
.200	76.5	77.4	79.3	80.5	80.4	82.6	84.3	86.5	91.4	95.5	95.0	[illegible]
.250	77.0	79.3	80.4	81.7	81.9	83.7	85.7	88.0	92.8	97.0	97.2	111.5
.315	79.9	81.1	82.0	83.1	83.3	85.6	88.1	92.1	95.6	99.0	100.7	114.0
.400	81.7	83.6	85.3	86.2	86.4	88.9	91.1	94.3	98.2	102.0	103.0	116.9
.500	84.2	84.9	85.5	86.6	86.7	89.2	91.4	95.1	99.8	103.7	107.7	117.6
.630	86.1	86.4	87.3	87.9	88.1	90.7	93.3	97.0	100.4	103.6	101.6	118.2
.800	84.0	86.6	86.6	88.2	88.6	90.7	93.1	96.4	100.2	102.0	102.2	117.9
1.00	85.1	85.6	86.7	88.4	88.9	91.7	94.2	97.3	100.0	101.1	97.7	117.3
1.25	86.2	85.0	87.2	88.1	88.7	91.7	94.4	97.3	99.2	98.9	94.6	116.4
1.60	84.6	85.9	87.4	88.2	89.6	92.6	94.6	97.2	98.3	97.4	92.9	116.0
2.00	84.1	86.3	87.5	88.5	89.3	92.1	94.7	97.0	97.3	95.5	90.5	115.4
2.50	84.4	86.6	87.9	89.1	89.6	92.6	95.0	96.9	96.0	94.3	88.9	115.4
3.15	84.7	86.6	87.9	89.1	89.7	92.6	94.9	96.3	95.6	92.6	87.0	114.0
4.00	85.4	87.0	88.1	89.5	90.0	92.9	94.8	96.0	94.8	91.7	86.6	114.7
5.00	85.2	88.4	87.6	88.0	89.6	92.4	94.3	94.8	93.5	90.2	84.0	113.9
6.30	84.9	86.3	87.4	88.7	89.6	92.1	93.9	94.0	92.4	89.5	83.0	113.4
8.00	83.4	85.6	86.9	88.2	89.0	91.6	93.1	93.2	91.3	88.2	82.7	[illegible]
10.0	82.9	85.0	86.3	87.6	88.5	91.1	92.3	92.0	89.8	86.7	81.1	111.0
12.5	82.6	84.1	85.0	86.7	87.6	90.0	91.0	90.7	87.9	84.7	78.0	110.0
16.0	81.7	83.4	84.6	86.1	86.0	89.3	90.6	89.5	86.6	82.7	76.4	109.0
20.0	80.1	81.9	83.1	84.6	85.3	87.4	88.1	87.4	84.1	80.3	73.3	107.8
25.0	78.7	81.0	82.2	83.5	84.5	86.0	86.0	84.9	82.0	78.4	71.0	106.0
31.5	77.0	79.2	81.0	81.9	83.1	84.4	85.2	83.4	80.6	76.5	69.1	105.0
40.0	74.9	77.1	79.1	80.2	81.0	82.5	83.2	81.4	78.4	74.5	67.7	[illegible]
50.0	72.2	74.6	76.2	77.0	78.3	79.7	80.2	78.8	75.9	73.0	69.2	106.1
63.0	69.1	71.2	73.2	74.3	75.0	76.0	76.9	75.8	73.1	71.2	68.7	98.9
80.0	65.4	67.8	69.6	70.5	71.6	72.9	73.3	72.5	70.7	69.5	68.5	92.0
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	97.1	98.7	99.8	101.0	101.6	104.2	106.2	108.2	109.8	111.4	110.6	

OAPWL = 120.3

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 705307 TEST DATE 11/10/76 SCALE RATIO 7.0/1 RUN NUMBER 20057 CONDITION 5703

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S	100.9	136.3	KG/S	47.6	50.1
P.R.		1.42	1.47		1.42	1.47	THRUST,IDL LB					
TEMP	(R)	1305.0	623.0	(K)	725.0	346.1	THRUST,MEA LB		0.0			0.0
RHO	LB/FT3	0.034	0.072	KG/M3	0.538	1.147	AREA (MOD) SQFT			SQM		
VEL	FPS	1227.3	885.4	M/S	374.1	269.9	W (MODEL) LB/S	2.1	2.7	KG/S	1.0	1.2

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	57.4	59.3	60.6	61.8	61.9	64.0	65.6	68.5	70.4	71.6	69.9
63	59.2	61.0	63.9	64.9	65.0	67.1	68.6	70.7	73.6	74.6	73.6
80	61.7	63.1	64.1	65.1	65.3	67.4	68.9	71.5	74.6	75.8	73.9
100	63.4	64.5	65.0	66.5	66.6	68.0	70.6	73.2	75.6	76.0	70.4
125	62.1	64.7	65.1	66.0	66.5	68.6	70.4	72.6	74.0	75.2	71.6
160	62.3	63.7	65.1	66.9	67.3	69.6	71.4	73.4	74.5	73.2	68.2
200	61.4	63.7	65.6	66.6	67.1	69.6	71.6	73.4	73.7	71.6	63.1
250	61.1	63.7	65.7	66.6	67.3	69.8	71.7	73.1	72.0	69.3	61.1
315	60.9	63.9	65.5	66.7	67.3	69.7	71.5	72.6	71.2	66.9	58.6
400	61.1	64.1	65.0	67.2	67.5	70.1	71.7	72.4	70.6	65.5	58.6
500	61.1	63.0	65.6	67.6	67.4	69.8	71.3	71.5	69.6	63.4	54.3
630	61.0	64.6	65.4	67.1	67.5	69.9	71.0	70.9	67.9	62.8	52.4
800	61.0	63.6	64.7	66.1	66.7	69.6	70.1	69.3	66.0	59.6	49.5
1000	60.2	62.5	64.1	65.5	66.3	68.3	69.2	67.9	64.2	58.2	47.2
1250	58.2	61.3	63.1	64.6	65.2	67.3	67.9	66.5	62.4	56.6	44.7
1600	58.0	59.9	61.8	63.3	64.6	66.0	66.2	64.3	59.7	52.9	40.8
2000	55.6	58.2	60.3	61.0	62.3	64.1	64.6	62.6	56.6	49.3	36.1
2500	53.5	56.4	58.3	60.0	60.5	62.3	61.8	59.4	53.6	45.1	30.4
3150	50.4	53.6	55.5	57.3	57.7	59.1	58.4	55.6	49.6	39.9	23.6
4000	47.6	50.8	52.9	54.5	[illegible]	55.8	55.1	50.8	44.9	34.2	15.1
5000	44.5	46.4	51.1	52.8	[illegible]	53.6	52.7	48.3	41.4	36.6	16.3
6300	40.6	44.1	47.2	48.0	[illegible]	49.5	48.3	43.4	35.6	23.6	1.2
8000	34.4	39.0	41.8	43.6	[illegible]	44.1	42.4	37.4	26.7	10.1	6.6
10000	24.5	29.6	33.2	34.8	35.6	34.4	32.3	26.5	14.1	1.2	0.0
OASPL	73.1	75.4	77.0	78.3	78.7	81.0	82.4	83.5	83.8	83.2	78.9
PNL	79.7	82.5	84.5	85.9	86.4	88.4	88.9	86.7	86.7	83.2	75.9

400. SIDELINE PNL	97.0	95.4	97.2	98.7	99.2	101.2	101.7	100.9	98.7	95.4	88.7
2000. SIDELINE PNL	72.5	75.5	77.5	78.9	79.4	81.4	82.5	82.4	80.4	76.9	69.4
4000. SIDELINE PNL	62.7	65.8	67.8	69.2	69.6	71.8	72.4	73.6	71.1	67.5	59.9
6000. SIDELINE PNL	56.3	59.5	61.6	63.1	63.4	65.6	66.7	66.8	65.2	61.7	53.9

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Shallow Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 3A; Condition 5704

a.) Model Data Measured At 15 Ft. Radius

STAND X206 PIG .D 705307 TEST DATE 11/16/76 SCALE RATIO 7.0/1 RUN NUMBER 20.57 CONDITION 5704

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT	[illegible]	[illegible]	SQM	[illegible]	[illegible]	MASS FLOW LB/S	[illegible]	[illegible]	KG/S	[illegible]	[illegible]
P.R.		1.40	1.52		1.40	1.52	THRUST,IDL LB			N		
TEMP	(R)	1322.6	636.0	(K)	734.4	353.3	THRUST,MEA LB	[illegible]		N	[illegible]	
RHO	LB/FT3	0.033	0.071	KG/M3	0.536	1.136	AREA (MOD) SQFT			SQM		
VEL	FPS	1296.0	931.0	M/S	395.3	283.8	W (MODEL) LB/S	[illegible]	[illegible]	KG/S	[illegible]	[illegible]

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL — [illegible]

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	P-OWL
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	72.0	77.1	79.3	80.6	79.8	80.2	82.6	84.3	85.8	89.2	92.5	0.0
.125	75.6	80.3	80.2	79.6	80.5	82.4	81.6	84.8	88.3	91.2	92.6	[illegible]
.160	77.9	80.7	79.7	80.0	78.8	80.2	82.0	84.3	88.8	93.6	94.5	[illegible]
.200	77.0	78.7	80.4	81.6	82.1	83.8	85.7	87.8	92.4	90.8	97.3	[illegible]
.250	79.0	80.4	81.7	83.0	83.1	85.0	87.0	90.2	94.3	98.7	98.4	[illegible]
.315	80.4	82.3	83.5	84.4	85.1	87.3	89.5	93.4	97.1	100.6	102.2	[illegible]
.400	83.0	85.0	86.7	87.5	88.4	90.4	92.6	96.1	100.0	103.8	105.7	[illegible]
.500	85.6	86.4	86.9	87.0	88.5	90.8	93.6	96.7	101.7	103.2	104.6	[illegible]
.630	88.[illegible]	88.1	88.7	89.7	89.9	92.1	94.9	98.6	102.2	106.6	104.6	[illegible]
.800	[illegible]	88.3	88.1	89.0	90.2	92.1	94.4	98.5	102.7	105.3	104.7	[illegible]
1.00	86.7	87.5	87.4	89.9	90.7	93.4	93.9	99.1	102.0	103.4	104.6	[illegible]
1.25	85.8	87.5	88.7	89.7	90.9	93.3	96.2	99.0	101.2	101.1	97.4	[illegible]
1.60	85.7	87.4	88.8	89.8	91.2	93.7	96.3	98.8	100.2	99.6	95.5	[illegible]
2.00	85.5	87.7	88.9	90.1	91.3	93.8	96.5	98.4	99.3	97.6	92.7	[illegible]
2.50	85.9	88.1	89.3	90.6	91.7	94.4	96.6	98.0	98.6	96.3	91.1	[illegible]
3.15	86.1	88.6	89.3	90.0	91.0	94.3	96.7	98.2	97.5	94.8	89.6	[illegible]
4.00	86.0	88.5	89.7	90.9	92.6	94.7	96.6	98.6	96.5	93.6	88.7	[illegible]
5.00	86.8	88.6	89.6	90.4	91.7	94.4	96.2	96.9	95.6	92.4	87.3	[illegible]
6.30	86.3	87.7	88.9	90.3	91.6	93.9	95.7	96.2	94.5	91.7	86.1	[illegible]
8.00	86.9	87.2	88.5	89.9	91.2	93.6	95.6	95.2	93.4	90.7	85.1	[illegible]
10.0	86.4	86.6	88.6	89.4	90.6	93.1	94.2	94.1	92.1	89.3	83.6	[illegible]
12.5	86.0	85.8	87.5	88.6	89.9	92.0	[illegible]	92.6	90.0	87.4	81.4	[illegible]
16.0	83.2	85.0	86.2	87.0	89.2	91.2	92.1	91.5	88.6	85.3	79.1	[illegible]
20.0	81.7	83.4	84.9	86.5	87.0	89.6	90.3	89.3	86.0	82.9	75.9	[illegible]
25.0	80.3	82.6	84.1	85.4	86.6	88.1	88.7	86.9	84.7	80.6	73.4	[illegible]
31.5	78.4	80.7	82.7	83.8	85.3	86.4	87.6	85.2	82.4	78.5	71.2	[illegible]
40.0	76.5	78.7	80.0	82.1	83.3	84.6	84.9	83.1	80.2	76.5	69.5	[illegible]
50.0	73.9	76.2	78.1	78.9	80.7	81.8	82.6	80.6	77.8	75.1	71.3	[illegible]
63.0	70.5	72.0	74.9	76.2	77.4	77.9	78.6	77.6	74.9	73.3	70.6	[illegible]
80.0	66.7	69.2	71.4	72.1	74.6	74.9	75.1	74.2	72.4	71.5	70.5	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
OASPL	98.6	100.2	101.3	102.6	103.6	106.6	108.0	110.6	111.7	113.5	112.6	OAPWL = 130.[illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 PIG .D 705307 TEST DATE 11/16/76 SCALE RATIO 7.0/1 RUN NUMBER 20.57 CONDITION 5704

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S	99.0	136.7	KG/S	44.9	62.0
P.R.		1.40	1.52		1.40	1.52	THRUST,IDL LB			N		
TEMP	(R)	1322.6	636.0	(K)	734.4	353.3	THRUST,MEA LB	0.0		N	0.0	
RHO	LB/FT3	0.033	0.071	KG/M3	0.536	1.136	AREA (MOD) SQFT			SQM		
VEL	FPS	1296.0	931.0	M/S	395.3	283.8	W (MODEL) LB/S	2.0	2.8	KG/S	0.9	1.3

FAA DAY

1/3 OCTAVE BAND

1200. SIDELINE

ANGLES IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	58.[illegible]	60.5	62.1	63.1	63.7	65.5	67.0	69.0	71.9	73.2	73.6
63	60.5	63.2	65.3	66.2	67.0	68.6	70.1	72.5	74.0	76.4	74.9
80	63.1	64.6	65.5	66.7	67.1	69.0	70.5	73.1	76.5	77.6	73.0
100	65.5	66.2	67.2	68.3	68.4	70.2	72.2	74.0	76.0	76.4	72.0
125	63.7	66.4	66.6	68.4	68.7	70.2	71.7	74.5	76.8	77.7	73.5
160	63.9	65.4	66.8	66.4	69.1	71.3	73.1	75.2	76.5	75.5	69.1
200	63.0	65.4	67.1	68.2	69.3	71.2	73.4	75.6	75.7	73.2	65.9
250	62.8	65.2	67.1	68.7	69.5	71.5	73.6	74.7	74.5	71.5	63.7
315	62.3	65.3	66.9	68.3	69.3	71.4	73.3	74.5	73.2	69.6	60.2
400	62.5	65.6	67.2	68.7	69.6	71.9	73.5	74.3	72.4	67.5	58.2
500	62.5	65.2	67.0	68.5	69.5	71.5	73.1	73.4	70.9	65.6	56.3
630	63.6	65.5	67.2	68.5	69.5	71.7	73.0	72.9	69.6	64.1	54.5
800	62.6	64.6	66.1	67.7	68.0	71.0	72.0	71.4	68.1	62.6	52.6
1000	61.6	63.9	65.6	67.1	68.3	70.1	71.6	70.1	66.3	60.4	49.5
1250	59.7	62.9	64.7	66.3	67.4	69.3	69.8	68.5	64.5	58.5	47.1
1600	58.3	61.5	63.5	65.1	66.1	68.6	68.1	66.4	62.0	55.5	43.3
2000	57.0	59.9	62.2	65.5	66.6	66.1	65.9	63.9	58.7	52.0	38.7
2500	55.6	58.6	59.9	61.7	62.9	64.2	63.9	61.4	55.6	47.7	33.1
3150	52.0	55.1	57.3	59.2	60.2	61.1	60.6	57.5	50.9	42.5	25.6
4000	48.6	52.4	56.8	56.4	57.3	57.9	57.6	52.8	46.8	36.4	17.5
5000	45.9	49.9	52.8	54.2	55.4	55.6	54.5	50.1	43.2	32.6	12.4
6300	41.6	45.7	48.9	50.5	51.4	52.6	50.6	45.3	37.6	25.6	3.0
8000	36.1	40.6	43.7	44.9	46.3	46.2	44.2	39.2	30.6	18.7	0.0
10000	25.9	31.2	34.9	36.7	37.4	36.3	34.6	20.3	17.9	3.3	0.0
OASPL	74.7	77.0	78.5	79.9	80.7	82.7	84.1	85.3	85.7	85.4	81.0
PNL	81.2	84.1	86.1	87.6	88.7	90.3	90.6	90.7	88.8	85.6	78.6

600. SIDELINE PNL	94.3	97.0	98.8	100.4	101.5	103.1	103.7	102.9	100.7	97.0	91.2
2000. SIDELINE PNL	74.1	77.1	79.1	80.6	81.6	83.3	84.3	84.4	82.6	79.5	72.7
4000. SIDELINE PNL	64.3	67.4	69.3	70.9	71.6	73.7	74.7	74.9	73.3	70.2	62.7
6000. SIDELINE PNL	57.9	61.7	63.1	64.7	65.6	67.5	68.6	68.8	67.4	64.2	56.7

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Shallow Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 3A; Condition 5705

a.) Model Data Measured At 15 Ft. Radius

STAND A206 RIG ID 705307 TEST DATE 11/10/76 SCALE RATIO 7.0/1 RUN NUMBER 20057 CONDITION 5705

AREA	SQFT	PRIMARY	FAN	SQM	PRIMARY	FAN
P.R.		1.72	1.69		1.72	1.69
TEMP	(R)	1433.6	647.6	(K)	796.1	359.4
RHO	LB/FT3	0.032	0.072	KG/M3	0.513	1.160
VEL	FPS	1577.5	1042.3	M/S	480.8	317.7

MASS FLOW LB/S, THRUST,IDL LB, THRUST,MEA LB, AREA (MOD) SQFT, W (MODEL) LB/S: [illegible]

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - [illegible]

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	76.0	81.3	83.3	83.5	83.7	84.3	86.1	88.9	90.0	93.6	96.7
.125	79.7	84.3	83.8	83.6	85.2	86.8	85.9	89.1	92.6	95.6	97.4
.160	82.5	85.4	84.1	84.2	83.3	84.3	86.0	88.7	93.2	97.7	99.3
.200	82.2	82.8	84.5	85.5	86.7	88.0	89.9	92.2	97.2	101.6	102.4
.250	83.2	84.6	85.8	87.2	87.6	89.2	91.4	94.6	99.2	103.7	104.1
.315	85.7	86.4	87.7	88.7	89.7	91.4	93.8	98.1	102.2	106.0	107.7
.400	87.5	89.4	91.3	91.7	93.4	94.7	97.1	101.2	105.8	109.5	111.3
.500	90.5	91.3	91.9	92.5	93.2	95.3	97.7	102.3	107.8	111.8	110.5
.630	93.6	93.1	94.0	94.7	95.3	97.1	100.0	104.6	109.2	112.8	110.3
.800	92.3	93.9	93.6	95.2	96.2	97.4	99.6	104.6	109.7	113.3	112.6
1.00	93.4	93.6	94.1	95.4	96.5	98.3	101.9	105.6	109.6	112.4	110.5
1.25	92.5	93.7	94.7	95.6	97.0	99.0	102.2	105.5	108.5	106.3	106.8
1.60	91.9	93.5	94.5	95.5	97.6	99.3	102.1	105.4	107.2	108.3	107.6
2.00	91.0	92.9	93.9	95.1	96.7	99.2	102.2	105.3	106.1	105.8	104.5
2.50	90.9	93.0	94.1	95.4	97.1	99.0	102.7	105.6	105.4	104.3	102.2
3.15	91.6	92.7	94.1	95.5	97.2	99.6	102.6	104.6	104.2	102.5	100.7
4.00	91.4	93.2	94.3	95.9	97.4	100.2	102.8	104.3	103.3	101.5	98.7
5.00	91.3	92.6	93.0	95.2	97.1	99.9	102.4	103.2	102.3	100.3	96.5
6.30	91.1	92.6	93.9	95.3	97.6	99.6	101.9	102.7	101.5	99.6	96.3
8.00	89.6	92.1	93.7	95.0	96.7	99.4	101.3	102.5	100.8	98.7	93.0
10.0	89.3	91.7	93.2	94.6	96.2	98.0	100.7	101.6	99.8	97.4	91.3
12.5	89.0	90.9	92.6	93.9	95.6	98.1	99.5	99.6	98.2	95.7	89.3
16.0	88.2	90.0	91.6	93.3	94.8	97.3	98.5	98.3	96.8	94.0	87.1
20.0	86.6	88.0	90.2	92.6	93.5	95.6	96.6	96.2	94.2	91.7	84.2
25.0	85.2	87.9	89.5	91.1	92.4	94.3	95.3	93.9	92.5	89.4	81.0
31.5	83.5	86.1	88.2	88.7	91.2	92.7	93.6	92.1	90.2	87.3	79.0
40.0	81.4	84.1	86.5	87.9	89.3	91.6	93.0	90.1	87.6	85.0	78.6
50.0	78.9	81.5	83.7	84.7	86.7	88.1	88.6	87.4	84.7	83.0	79.3
63.0	75.6	78.1	80.6	82.0	83.4	84.3	85.3	84.1	81.7	81.1	78.7
80.0	77.0	76.6	77.1	77.9	80.0	81.2	81.7	80.9	79.1	79.4	78.6
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	103.9	105.4	106.5	107.7	109.1	111.5	113.9	116.3	118.6	120.9	119.8

OAPWL = [illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND A206 RIG ID 705307 TEST DATE 11/10/76 SCALE RATIO 7.0/1 RUN NUMBER 20057 CONDITION 5705

AREA	SQFT	PRIMARY	FAN	SQM	PRIMARY	FAN
P.R.		1.72	1.69		1.72	1.69
TEMP	(R)	1433.6	647.6	(K)	796.1	359.4
RHO	LB/FT3	0.032	0.072	KG/M3	0.513	1.160
VEL	FPS	1577.5	1042.3	M/S	480.8	317.7

MASS FLOW LB/S, THRUST,IDL LB, THRUST,MEA LB, AREA (MOD) SQFT, W (MODEL) LB/S: [illegible]

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	62.7	64.6	66.3	67.4	68.3	69.6	71.3	74.5	77.6	78.6	76.9
63	65.6	67.6	69.7	70.4	72.0	72.9	74.6	77.6	80.6	82.1	80.5
80	68.0	69.5	70.5	71.2	72.8	73.3	75.2	78.7	82.6	84.4	79.7
100	70.9	71.2	72.5	73.3	73.8	75.2	77.3	80.8	83.6	85.2	79.1
125	69.0	72.9	72.1	73.8	74.7	75.5	77.1	80.8	84.3	85.7	80.8
160	70.6	71.5	72.5	73.9	74.9	77.2	79.1	81.7	84.1	84.5	79.0
200	69.7	71.6	73.1	74.1	75.4	76.9	79.4	81.6	83.6	82.4	77.3
250	69.6	71.3	72.8	73.9	75.3	77.1	79.2	81.3	81.5	80.7	75.8
315	67.8	70.5	71.9	73.3	74.7	76.8	79.0	80.9	80.6	77.2	72.6
400	67.6	70.5	72.0	73.5	75.6	77.3	79.4	80.5	79.7	75.5	69.3
500	67.4	69.9	71.8	73.4	74.9	77.0	79.6	79.8	77.6	73.3	67.2
630	67.6	70.2	71.8	73.5	74.9	77.2	78.8	79.2	76.4	71.8	64.5
800	67.1	69.2	70.9	72.5	74.2	76.5	78.2	77.7	74.8	69.9	61.2
1000	66.4	68.8	70.6	72.1	73.7	75.8	77.2	76.6	73.3	68.3	58.2
1250	66.4	67.8	69.9	71.4	72.9	75.1	76.1	75.3	71.9	66.5	55.6
1600	63.2	66.6	68.7	70.3	71.7	73.7	74.6	73.3	69.7	63.6	51.6
2000	64.0	65.0	67.3	68.8	70.3	72.2	72.5	70.9	66.9	60.3	46.6
2500	60.0	63.6	65.3	67.2	68.5	70.3	70.3	68.2	63.6	56.4	41.1
3150	58.9	60.5	62.6	64.7	65.9	67.3	66.9	64.4	59.1	51.3	33.9
4000	56.3	57.7	60.2	62.1	63.1	64.1	63.6	59.8	56.6	45.2	25.9
5000	51.0	55.3	58.3	60.1	61.3	61.9	61.1	57.0	51.0	41.4	21.6
6300	46.5	51.1	54.6	56.3	57.4	58.6	56.9	52.1	44.6	34.1	11.5
8000	41.1	45.9	49.3	50.7	52.3	52.5	50.8	46.6	37.5	26.1	3.5
10000	31.6	36.5	40.6	42.5	43.4	42.7	40.7	34.8	24.7	11.1	0.0
OASPL	80.1	82.2	83.6	85.6	86.3	88.2	89.9	91.5	92.6	92.6	88.2
PNL	86.5	89.4	91.4	93.1	94.4	96.2	97.1	97.2	96.1	94.1	87.8
400. SIDELINE PNL	99.5	102.2	104.2	105.8	107.1	109.0	109.9	109.5	107.9	105.8	99.6
2000. SIDELINE PNL	79.3	82.4	84.9	86.6	87.4	89.2	90.5	91.6	90.1	88.2	81.5
4000. SIDELINE PNL	69.8	72.7	74.6	76.2	77.5	79.4	80.9	81.5	81.0	79.1	72.6
6000. SIDELINE PNL	63.5	66.6	68.4	70.6	71.4	73.2	74.7	75.4	75.2	73.3	65.9

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Shallow Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 3A; Condition 5706

a.) Model Data Measured At 15 Ft. Radius

STAND A206 RIG ID 705307 TEST DATE 11/10/76 SCALE RATIO 7.0/1 RUN NUMBER 70.57 CONDITION 5706

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		1.70	1.74		1.70	1.74
TEMP	(R)	1445.0	660.0	(K)	802.8	370.0
RHO	LB/FT3	0.032	0.070	KG/M3	0.514	1.124
VEL	FPS	1633.6	1605.2	M/S	497.9	336.8

MASS FLOW LB/S; THRUST,ICL LB; THRUST,MEA LB; AREA (MOD) SQFT; W (MODEL) LB/S

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (PWL)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PWL
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	77.8	82.1	84.4	86.7	85.0	89.4	87.2	89.8	91.6	96.7	97.7	[illegible]
.125	80.3	84.6	84.4	84.3	86.2	87.5	88.5	90.1	93.7	96.7	98.1	[illegible]
.160	83.0	81.4	83.1	83.6	83.9	83.1	87.2	89.5	94.6	99.1	100.4	[illegible]
.200	83.5	83.9	85.0	86.7	88.1	88.8	92.2	93.2	98.3	102.8	103.[illegible]	[illegible]
.250	84.2	85.6	86.7	88.1	88.6	90.0	92.6	95.9	100.3	103.1	105.1	[illegible]
.315	85.4	87.2	88.6	89.7	90.6	92.5	94.4	99.5	103.4	107.4	109.0	[illegible]
.400	86.4	90.4	91.0	92.7	94.4	95.7	98.1	102.4	106.8	110.0	112.3	[illegible]
.500	91.0	92.4	92.7	93.5	94.6	96.4	98.8	103.4	109.1	113.0	111.7	[illegible]
.630	94.6	94.5	94.0	95.0	96.2	98.7	101.2	105.9	110.7	114.3	111.5	[illegible]
.800	93.7	95.3	94.8	96.4	97.3	98.6	101.1	106.1	111.2	114.9	113.3	[illegible]
1.00	94.7	94.6	95.4	96.6	97.9	100.6	103.2	107.1	111.4	114.4	112.2	[illegible]
1.25	94.1	95.3	96.3	97.8	98.6	100.3	103.5	107.1	110.3	112.7	111.1	[illegible]
1.60	93.9	95.3	96.1	96.9	98.3	100.7	103.4	106.9	108.9	111.1	110.2	[illegible]
2.00	92.9	96.4	95.4	96.4	98.2	100.6	103.7	106.6	107.7	108.4	107.6	[illegible]
2.50	92.3	96.4	95.4	96.7	98.5	101.0	104.1	106.6	107.0	106.9	105.7	[illegible]
3.15	92.3	96.0	95.3	96.7	98.4	101.2	103.4	106.0	105.6	105.6	104.1	[illegible]
4.00	92.4	96.2	95.4	96.9	98.7	102.5	104.2	105.8	105.3	104.3	101.6	[illegible]
5.00	92.6	93.8	95.6	96.5	98.3	101.3	103.7	104.8	103.9	102.7	99.3	[illegible]
6.30	92.3	93.7	95.6	96.5	98.3	100.9	103.4	104.3	103.1	101.9	97.1	[illegible]
8.00	91.0	93.1	94.6	96.5	98.0	100.8	102.6	103.6	102.6	100.7	95.7	[illegible]
10.0	90.4	92.9	94.3	96.6	97.6	100.3	102.2	102.7	101.7	99.4	93.4	[illegible]
12.5	90.6	92.1	93.0	95.3	97.6	99.5	101.1	101.4	100.0	97.7	91.1	[illegible]
16.0	89.4	91.2	92.0	94.7	96.5	98.9	100.3	100.7	98.8	95.9	88.9	[illegible]
20.0	87.7	90.0	91.5	93.5	95.0	97.2	98.4	98.1	96.6	93.6	86.0	[illegible]
25.0	86.4	89.3	90.8	92.5	94.0	96.1	97.2	95.9	94.0	91.8	83.0	[illegible]
31.5	84.6	87.5	89.5	91.1	92.0	94.5	95.6	94.2	92.6	89.9	81.9	[illegible]
40.0	82.5	85.3	87.0	89.2	90.8	92.6	93.4	92.1	89.9	87.3	79.9	[illegible]
50.0	80.6	82.8	85.6	86.2	88.1	89.9	90.5	89.4	87.0	85.4	81.5	[illegible]
63.0	76.6	79.4	81.9	83.4	84.9	86.6	87.2	86.7	84.0	83.3	80.6	[illegible]
80.0	73.6	75.6	78.2	79.4	81.5	82.7	83.4	82.7	80.9	81.3	80.4	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	105.2	106.7	107.7	109.0	110.5	112.9	115.3	117.0	120.1	122.7	121.4	

OAPWL = [illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND A206 RIG ID 705307 TEST DATE 11/10/76 SCALE RATIO 7.0/1 RUN NUMBER 70.57 CONDITION 5706

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		1.70	1.74		1.70	1.74
TEMP	(R)	1445.0	660.0	(K)	802.8	370.0
RHO	LB/FT3	0.032	0.070	KG/M3	0.514	1.124
VEL	FPS	1633.6	1605.2	M/S	497.9	336.8

MASS FLOW LB/S; THRUST,ICL LB; THRUST,MEA LB; AREA (MOD) SQFT; W (MODEL) LB/S

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	63.4	65.4	67.2	68.4	69.2	70.7	72.4	75.9	78.2	86.6	78.2
63	65.9	68.6	76.9	77.6	73.6	73.9	75.6	78.8	81.6	83.4	81.3
80	69.3	70.6	71.3	[illegible]	73.2	74.6	76.3	79.6	83.9	85.6	86.9
100	72.1	72.6	73.3	74.4	74.7	76.3	78.5	87.1	85.3	86.7	86.3
125	71.0	73.4	73.3	75.0	75.8	76.7	78.4	82.3	85.8	87.3	82.1
160	71.9	72.7	73.8	75.1	76.3	78.9	86.4	83.7	85.9	86.9	86.9
200	71.3	73.2	74.7	75.6	77.0	78.2	80.7	83.2	84.8	84.0	79.6
250	71.6	73.1	74.4	75.3	76.6	76.5	80.5	82.8	83.2	83.6	78.4
315	69.7	72.0	73.4	74.6	76.7	78.2	80.5	82.2	81.6	74.8	75.1
400	69.6	71.9	73.3	74.8	76.4	78.5	80.8	82.1	80.8	78.1	72.6
500	69.7	71.7	73.0	74.4	76.1	78.4	80.3	81.2	79.2	75.0	70.6
630	68.6	71.2	72.9	74.5	76.2	78.5	80.4	80.7	78.7	74.4	67.6
800	68.4	70.4	72.1	73.8	75.4	77.9	79.5	79.3	76.4	72.3	64.6
1000	67.6	69.9	71.7	73.3	75.6	77.1	78.7	78.2	74.9	70.6	60.5
1250	65.8	68.8	70.8	72.7	74.2	76.5	77.8	76.9	73.7	66.5	57.2
1600	64.3	67.8	69.0	71.7	73.1	75.2	78.1	75.6	71.6	65.6	53.1
2000	63.6	66.7	68.5	70.2	71.7	73.6	74.1	72.7	68.7	62.3	48.4
2500	61.2	64.2	66.5	68.6	70.0	71.9	72.1	70.1	65.8	58.3	42.9
3150	58.0	61.7	63.9	66.4	67.4	68.9	68.7	66.3	61.5	53.2	35.7
4000	54.7	58.1	61.5	63.5	64.7	65.9	65.5	61.6	58.9	47.6	27.9
5000	52.1	56.5	59.6	61.5	62.9	63.7	63.8	59.1	55.6	44.6	23.1
6300	47.0	52.3	55.9	57.6	58.9	58.6	58.5	54.1	47.1	36.4	13.4
8000	42.7	47.2	56.6	57.2	53.7	54.3	52.7	48.0	39.0	28.3	5.7
10000	38.2	37.8	41.9	43.9	44.9	44.4	42.6	36.9	27.6	13.7	0.0
OASPL	81.5	83.5	84.8	86.2	87.6	89.5	91.3	93.6	94.2	94.6	89.0
PNL	87.0	90.7	92.7	94.5	95.4	97.7	98.6	98.9	97.9	98.3	89.9

SIDELINE		60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
400. SIDELINE	PNL	104.6	103.5	105.4	107.1	108.6	110.5	111.5	111.7	109.7	108.6	101.7
2000. SIDELINE	PNL	80.9	83.7	85.7	87.4	88.8	90.6	92.6	92.8	91.9	90.3	83.0
4000. SIDELINE	PNL	71.2	74.1	75.9	77.5	79.0	80.8	82.3	83.1	82.9	81.4	74.2
6000. SIDELINE	PNL	65.3	66.6	69.7	71.3	72.8	74.5	76.1	77.4	77.0	75.5	67.9

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Shallow Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 3A; Condition 5707

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 70536? TEST DATE 11/10/76 SCALE RATIO 7.0/1 RUN NUMBER 70507 CONDITION 5707

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		1.89	1.82		1.89	1.82
TEMP	(R)	1474.0	681.6	(K)	818.9	378.3
RHO	LB/FT3	0.032	0.069	KG/M3	0.511	1.112
VEL	FPS	1721.9	1134.0	M/S	524.8	345.6

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (MODEL)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PNDB
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	79.3	83.6	85.6	85.7	86.1	86.5	87.9	90.9	92.2	98.1	99.3	[illegible]
.125	82.0	86.4	85.8	85.7	87.6	89.0	87.8	91.3	94.8	98.0	99.7	[illegible]
.160	85.6	87.4	88.1	88.1	85.4	86.4	88.1	90.4	95.5	100.0	101.6	[illegible]
.200	84.4	85.2	86.9	88.1	89.7	90.2	92.2	94.2	99.5	104.5	104.6	[illegible]
.250	85.6	86.7	88.0	89.4	89.9	91.4	93.4	96.0	101.3	106.4	106.9	[illegible]
.315	87.3	88.5	90.0	90.9	92.3	93.9	96.2	100.7	104.7	109.0	110.6	[illegible]
.400	89.8	91.7	93.3	94.1	95.7	97.1	99.6	103.8	108.4	112.3	114.0	[illegible]
.500	93.2	93.7	94.6	94.8	95.6	97.6	100.3	104.9	110.8	114.7	[illegible]	[illegible]
.630	90.2	95.7	96.2	97.1	97.6	99.5	102.6	107.5	112.5	116.0	[illegible]	[illegible]
.800	95.3	96.7	96.2	97.9	98.8	100.1	102.6	107.9	113.3	116.9	115.1	[illegible]
1.00	96.6	96.9	97.3	98.3	99.5	102.4	104.9	108.9	[illegible]	[illegible]	[illegible]	[illegible]
1.25	96.4	97.5	98.5	99.2	100.7	102.1	105.3	109.2	113.1	115.8	116.0	[illegible]
1.60	96.6	97.8	98.6	99.1	100.4	102.6	105.3	108.8	111.5	114.9	113.8	[illegible]
2.00	95.7	97.0	97.7	98.5	100.0	102.4	105.5	108.5	110.8	112.7	[illegible]	[illegible]
2.50	96.7	96.4	97.3	98.6	100.2	102.7	106.0	108.5	109.3	111.0	110.1	[illegible]
3.15	96.7	96.1	97.2	98.4	100.1	102.8	105.9	106.0	108.6	109.2	106.6	[illegible]
4.00	94.3	96.0	97.2	98.5	100.2	103.2	106.1	107.7	107.2	108.1	105.8	[illegible]
5.00	94.3	95.4	96.6	98.0	99.9	102.8	105.6	106.7	106.3	104.3	103.1	[illegible]
6.30	93.8	95.4	96.4	97.9	99.8	102.6	105.1	106.2	105.6	105.0	100.4	[illegible]
8.00	97.5	94.8	96.3	97.8	99.6	102.4	104.8	105.6	104.9	103.4	98.3	[illegible]
10.0	91.9	94.3	95.9	97.4	99.2	102.0	104.1	104.7	103.9	101.6	96.0	[illegible]
12.5	91.5	93.6	95.4	96.8	98.5	101.3	103.6	103.5	102.3	100.1	93.7	[illegible]
16.0	90.7	92.7	94.5	96.3	98.6	100.6	102.1	102.4	101.2	96.2	91.4	[illegible]
20.0	89.2	91.4	93.2	94.9	96.5	98.9	100.3	100.3	99.6	96.1	88.5	[illegible]
25.0	87.9	90.8	92.4	94.1	95.6	97.8	99.0	98.1	97.3	94.2	86.3	[illegible]
31.5	86.2	88.0	91.1	92.8	94.4	96.2	97.5	96.3	95.6	92.2	84.1	[illegible]
40.0	84.0	86.7	89.3	90.8	92.4	94.4	95.5	94.4	92.6	89.9	81.8	[illegible]
50.0	81.6	84.2	86.6	88.0	89.9	91.6	92.5	91.5	89.6	87.9	82.3	[illegible]
63.0	78.5	80.9	83.5	85.3	86.7	87.7	89.6	88.3	86.4	85.8	81.3	[illegible]
80.0	74.9	77.4	79.8	80.9	83.1	84.5	85.2	86.8	83.5	83.6	80.9	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	107.1	108.4	109.4	110.6	112.1	114.5	117.1	119.6	122.3	125.7	126.0	

EAPNL = 146.5

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 70536? TEST DATE 11/10/76 SCALE RATIO 7.0/1 RUN NUMBER 70507 CONDITION 5707

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		1.89	1.82		1.89	1.82
TEMP	(R)	1474.0	681.6	(K)	818.9	370.3
RHO	LB/FT3	0.032	0.069	KG/M3	0.511	1.112
VEL	FPS	1721.9	1134.0	M/S	524.8	345.6

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	64.0	66.7	68.6	69.6	70.9	72.1	73.7	77.1	79.5	81.6	79.8
63	67.3	69.9	71.9	72.8	74.3	75.3	77.1	80.2	83.2	84.9	83.2
80	70.7	71.9	72.6	73.5	74.4	76.6	77.8	81.3	85.6	87.3	82.4
100	73.5	73.8	74.7	75.7	76.3	77.6	79.9	83.7	87.1	88.4	81.8
125	72.6	74.8	74.7	76.5	77.3	78.2	79.9	84.1	87.9	89.3	83.9
160	73.8	74.8	75.7	76.8	77.9	80.3	82.1	85.6	88.2	89.6	83.6
200	73.6	75.4	76.9	77.7	79.1	80.6	82.5	85.3	87.6	87.9	82.5
250	73.7	75.6	76.9	77.5	78.7	80.4	82.4	84.7	85.6	86.8	82.6
315	72.5	74.6	75.7	76.7	78.0	80.6	82.3	84.1	84.0	84.1	79.5
400	72.4	73.9	75.2	76.7	78.1	80.2	82.7	84.0	83.1	82.2	77.2
500	71.1	73.3	74.9	76.3	77.8	80.6	82.3	83.2	81.4	80.0	75.1
630	70.5	73.0	74.7	76.1	77.7	80.2	82.3	82.6	80.3	78.4	71.6
800	70.1	72.6	73.7	75.3	77.0	79.4	81.4	81.2	78.8	75.9	67.8
1000	69.1	71.6	73.3	74.7	76.5	78.6	80.4	80.1	77.4	73.7	63.8
1250	67.3	70.5	72.5	74.2	75.8	78.1	79.6	78.9	76.0	71.2	60.3
1600	65.8	69.2	71.4	73.1	74.7	76.9	78.0	77.0	73.8	68.6	55.7
2000	64.5	67.7	70.1	71.7	73.2	75.4	76.6	74.8	71.6	64.7	51.0
2500	62.5	65.7	68.2	70.2	71.7	73.6	73.9	72.3	68.2	60.6	43.4
3150	59.5	63.1	65.0	67.6	68.9	70.6	70.6	68.5	63.9	55.7	38.2
4000	56.2	60.6	63.1	65.1	66.3	67.6	67.3	64.0	59.4	50.0	30.6
5000	53.7	56.0	61.2	63.2	64.5	65.3	65.0	61.2	51.8	46.3	25.3
6300	49.1	53.7	57.4	59.2	60.5	61.4	60.6	56.4	45.8	39.6	15.3
8000	43.8	48.6	52.2	56.0	55.9	56.8	56.7	50.1	42.4	31.6	6.5
10000	33.4	34.3	43.5	45.6	46.3	46.1	[illegible]	39.6	29.4	15.8	0.0
OASPL	83.4	85.4	86.7	87.9	89.2	91.1	93.1	94.9	96.4	97.1	92.1
PNL	89.6	92.4	94.0	96.3	97.5	99.4	100.5	100.8	100.4	99.3	93.0

400. SIDELINE											
PNL	[illegible]	105.1	107.1	108.6	110.2	112.2	113.3	113.3	112.1	110.4	104.9
2000. SIDELINE											
PNL	83.0	85.6	87.5	87.0	90.4	92.4	93.6	94.5	94.3	93.3	86.4
4000. SIDELINE											
PNL	75.5	76.1	77.8	79.3	80.7	82.5	84.2	85.8	85.5	84.6	77.6
6000. SIDELINE											
PNL	67.5	70.1	71.7	73.2	74.5	76.3	78.0	79.0	79.7	78.8	71.6

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Shallow Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 3A; Condition 5708

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG 10 TO5367 TEST DATE 11/10/76 SCALE RATIO 7.0/1 RUN NUMBER 20.57 CONDITION 5708

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		1.96	1.96		1.96	1.96	THRUST,IDL	LB			N		
TEMP	(R)	1531.0	679.0	(K)	850.6	377.2	THRUST,MEA	LB	0.0		N		0.0
RHO	LB/FT3	0.031	0.076	KG/M3	0.498	1.219	AREA (MOD)	SQFT			SQM		
VEL	FPS	1806.2	1169.7	M/S	549.9	356.5	W (MODEL)	LB/S	2.9	3.2	KG/S	1.3	1.5

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (MODEL)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PWL (DB)
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	86.2	88.4	86.4	87.0	87.8	87.4	89.3	92.1	93.5	97.1	100.4	[illegible]
.125	85.0	87.2	86.7	87.1	89.1	90.1	88.9	92.5	95.9	99.1	100.6	[illegible]
.160	86.2	89.0	87.7	87.4	88.6	87.5	89.5	91.7	97.0	101.5	103.1	[illegible]
.200	86.0	86.3	88.3	89.2	90.8	91.0	93.6	95.5	100.9	105.7	106.5	[illegible]
.250	87.3	88.0	89.2	90.4	91.1	92.8	94.7	98.2	103.2	107.6	108.1	[illegible]
.315	88.4	89.7	91.3	92.0	93.2	95.2	97.6	102.6	106.3	110.1	111.6	[illegible]
.400	91.3	93.1	94.4	95.1	96.0	96.5	100.6	105.0	110.1	113.6	115.5	[illegible]
.500	94.3	95.6	95.5	96.6	96.9	99.6	101.9	106.2	112.6	116.3	114.5	[illegible]
.630	97.6	97.0	97.4	98.4	99.1	101.0	100.2	109.3	114.4	117.6	116.3	[illegible]
.800	96.8	98.1	97.6	99.3	100.3	101.5	104.1	109.6	115.5	118.5	116.3	[illegible]
1.00	98.6	96.4	98.7	99.8	101.2	103.9	106.8	110.9	116.1	118.9	116.1	[illegible]
1.25	98.3	99.3	100.4	100.9	102.5	103.9	107.0	111.0	115.7	118.3	115.9	[illegible]
1.60	98.6	100.0	100.8	100.9	102.4	104.4	107.1	110.7	114.2	118.0	116.2	[illegible]
2.00	98.1	99.1	99.7	100.3	101.9	104.2	107.4	110.4	112.7	116.3	114.3	[illegible]
2.50	97.0	98.5	99.1	100.4	102.0	104.5	107.8	110.5	1.1.9	114.9	113.2	[illegible]
3.15	96.8	98.0	98.9	100.0	101.8	104.4	108.6	109.8	110.7	113.2	111.4	[illegible]
4.00	96.2	97.0	98.7	100.1	101.9	104.0	107.8	109.7	109.4	111.9	108.6	[illegible]
5.00	95.8	96.9	98.1	99.5	101.6	104.7	107.3	108.6	108.9	109.8	105.6	[illegible]
6.30	95.4	96.9	98.0	99.5	101.5	104.4	107.2	108.0	108.3	108.0	103.1	[illegible]
8.00	94.2	96.4	97.7	99.3	101.3	104.3	106.6	107.6	107.5	106.2	100.8	[illegible]
10.0	93.7	95.8	97.5	99.0	100.9	103.9	106.1	106.9	106.5	104.7	98.4	[illegible]
12.5	93.0	95.1	97.0	98.3	100.3	103.3	105.2	105.8	104.9	102.8	96.7	[illegible]
16.0	92.4	94.3	96.2	97.9	99.9	102.6	104.2	104.9	103.7	101.0	94.6	[illegible]
20.0	90.9	93.1	94.9	96.8	98.7	101.1	102.6	102.9	101.6	98.4	91.4	[illegible]
25.0	89.4	92.3	94.0	96.0	97.6	99.9	101.2	100.9	100.1	97.0	89.6	[illegible]
31.5	87.7	90.5	93.0	94.6	96.2	98.3	99.8	99.2	98.1	95.2	87.2	[illegible]
40.0	85.8	88.4	91.1	92.9	94.4	96.6	97.9	97.3	95.8	93.1	85.4	[illegible]
50.0	83.2	86.0	88.4	89.9	91.9	93.9	95.0	94.4	93.1	90.9	86.0	[illegible]
63.0	80.0	82.7	85.4	87.1	88.7	90.1	91.6	91.3	89.0	88.7	85.1	[illegible]
80.0	76.9	79.1	81.7	83.1	85.2	86.0	87.9	87.0	86.0	86.3	84.0	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	108.9	110.1	111.1	112.2	113.9	116.3	118.9	121.5	124.7	127.5	125.6	

OAPWL = [illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG 10 TO5367 TEST DATE 11/10/76 SCALE RATIO 7.0/1 RUN NUMBER 20.57 CONDITION 5708

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	144.1	157.8	KG/S	65.3	71.6
P.R.		1.96	1.96		1.96	1.96	THRUST,IDL	LB			N		
TEMP	(R)	1531.0	679.0	(K)	850.6	377.2	THRUST,MEA	LB	0.0		N		0.0
RHO	LB/FT3	0.031	0.076	KG/M3	0.498	1.219	AREA (MOD)	SQFT			SQM		
VEL	FPS	1806.2	1169.7	M/S	549.9	356.5	W (MODEL)	LB/S	2.9	3.2	KG/S	1.3	1.5

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	65.9	67.9	69.9	70.7	72.8	73.4	75.1	76.4	81.1	82.7	81.0
63	68.8	71.3	73.0	73.8	75.4	76.7	78.3	81.4	84.9	86.2	84.7
80	72.0	73.2	74.1	74.7	75.5	77.2	79.6	82.8	87.4	88.9	83.7
100	74.9	75.1	75.9	77.0	77.6	79.1	81.5	85.5	89.9	90.5	83.1
125	74.1	76.2	76.1	77.9	78.6	79.6	81.4	85.8	90.3	90.9	85.1
160	75.2	76.3	77.1	78.3	79.6	81.4	83.8	87.6	90.6	91.8	84.6
200	75.5	77.2	78.8	79.4	80.9	81.6	84.2	87.1	90.2	90.4	84.4
250	75.7	77.8	78.9	79.3	80.7	82.2	84.2	86.6	88.5	89.9	84.4
315	74.9	76.7	77.7	78.5	79.9	81.8	84.2	86.0	86.6	87.7	87.3
400	73.7	76.0	77.0	78.5	79.9	82.0	84.5	86.0	85.7	86.1	86.3
500	73.2	75.2	76.6	77.9	79.5	81.6	84.6	85.6	84.1	84.0	77.9
630	72.4	74.8	76.2	77.3	79.4	81.8	84.6	84.6	83.0	82.7	76.4
800	71.8	73.5	75.2	76.8	78.7	81.3	83.1	83.1	81.4	79.4	76.3
1000	70.7	73.1	74.7	76.3	76.2	80.4	82.5	81.9	80.1	76.7	66.5
1250	69.6	72.1	73.9	75.7	77.5	80.0	81.4	80.9	78.6	74.0	62.8
1600	67.6	70.7	73.0	74.7	76.4	78.8	80.0	79.2	76.4	70.9	58.8
2000	66.0	69.2	71.7	73.2	75.0	77.4	76.7	77.1	73.6	67.4	54.0
2500	64.2	67.3	69.9	71.8	73.6	75.6	76.0	74.0	70.7	63.4	48.6
3150	61.2	64.8	67.3	69.5	71.1	72.6	72.4	71.1	66.5	58.5	41.6
4000	57.7	62.1	64.7	67.0	68.3	69.7	69.5	66.8	62.7	52.8	33.7
5000	55.2	59.7	63.1	65.0	66.3	67.5	67.3	64.1	58.9	49.3	20.4
6300	50.9	55.4	59.2	61.3	62.5	63.8	63.0	59.1	53.0	42.2	16.9
8000	45.4	50.4	54.0	55.9	57.5	58.3	57.7	53.0	45.9	34.0	10.2
10000	35.4	41.1	45.4	47.6	48.7	48.5	47.0	47.0	32.0	18.7	0.0
OASPL	85.2	87.1	88.3	89.5	90.9	92.8	94.8	96.7	98.7	99.3	93.8
PNL	91.3	94.1	96.1	97.6	99.4	101.3	102.5	102.9	102.9	102.1	95.4
400. SIDELINE											
PNL	104.7	106.8	108.8	110.4	112.1	114.2	115.7	115.5	114.7	113.8	107.2
2000. SIDELINE											
PNL	84.9	87.5	89.1	90.7	92.3	94.2	95.7	96.6	96.9	96.1	89.2
4000. SIDELINE											
PNL	75.4	78.0	79.8	81.0	82.5	84.3	86.3	87.3	88.6	87.3	79.8
8000. SIDELINE											
PNL	64.5	77.1	73.8	74.9	76.3	78.1	79.9	81.0	82.4	81.6	73.1

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Flow Simulation; Configuration 3A; Condition 5709

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 705367 TEST DATE 11/10/76 SCALE RATIO 7.0/1 RUN NUMBER 20057 CONDITION 5709

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		2.04	1.95		2.04	1.95	THRUST,IDL	LB			N		
TEMP	(R)	1576.0	687.0	(K)	875.6	381.7	THRUST,MEA	LB		0.0	N	0.0	
RHO	LB/FT3	0.030	0.070	KG/M3	0.486	1.123	AREA (MODEL)	SQFT			SQM		
VEL	FPS	1877.1	1196.4	M/S	572.1	364.7	W (MODEL)	LB/S	3.0	3.2	KG/S	1.3	1.4

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS RAW CORRECTED SPL - (MODEL)

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PEAK 60-170
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	101.5	[illegible]
.125	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	107.6	[illegible]
.160	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	106.4	[illegible]
.200	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	107.5	[illegible]
.250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	109.6	[illegible]
.315	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	113.3	[illegible]
.400	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	110.8	[illegible]
.500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.630	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.800	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.60	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3.15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6.30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
12.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
40.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
50.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
63.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
80.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	110.2	111.5	112.5	113.8	115.4	117.8	120.4	123.2	126.7	129.6	127.0	

OAPWL = 144.4

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 705367 TEST DATE 11/10/76 SCALE RATIO 7.0/1 RUN NUMBER 20057 CONDITION 5709

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM	0..		MASS FLOW	LB/S	145.5	158.3	KG/S	66.0	71.8
P.R.		2.04	1.95		2.04	1.95	THRUST,IDL	LB			N		
TEMP	(R)	1576.0	687.0	(K)	875.6	381.7	THRUST,MEA	LB		0.0	N	0.0	
RHO	LB/FT3	0.030	0.070	KG/M3	0.486	1.123	AREA (MODEL)	SQFT			SQM		
VEL	FPS	1877.1	1196.4	M/S	572.1	364.7	W (MODEL)	LB/S	3.0	3.2	KG/S	1.3	1.4

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	67.1	69.1	71.6	72.3	73.2	74.5	76.1	79.3	82.1	84.0	87.5
63	69.8	72.6	74.1	75.1	76.6	77.7	79.4	82.6	86.1	87.6	85.0
80	73.1	74.2	75.2	76.0	76.8	78.4	80.4	84.6	88.6	90.1	84.9
100	75.0	76.1	77.1	78.4	78.7	80.2	82.6	86.8	90.5	91.5	84.3
125	75.1	77.1	77.2	79.2	80.1	80.8	82.7	87.3	91.7	92.4	86.3
160	76.4	77.7	78.4	79.8	80.9	83.0	85.1	88.6	92.6	92.7	85.8
200	76.6	78.6	80.0	80.9	82.4	83.1	85.6	88.8	92.6	92.3	85.7
250	77.0	79.2	80.5	81.0	82.2	83.1	85.8	88.4	91.1	92.3	86.0
315	76.6	78.4	79.4	80.5	81.7	83.5	85.6	87.6	89.5	90.7	84.2
400	75.4	77.5	78.8	80.2	81.6	83.6	85.9	87.6	88.3	89.4	82.1
500	74.8	76.7	78.2	79.6	81.5	83.5	85.5	88.0	86.7	87.4	79.6
630	73.8	76.1	77.7	79.1	80.9	83.1	85.4	86.1	85.4	85.1	76.0
800	73.1	75.1	76.8	78.4	80.2	82.8	84.7	84.9	84.1	82.1	72.2
1000	72.8	74.3	76.3	77.8	79.9	82.1	83.9	83.7	82.5	79.3	68.6
1250	70.3	73.5	75.4	77.3	79.1	81.6	83.0	82.5	80.7	76.6	65.2
1600	68.7	72.1	74.4	76.2	78.0	80.4	81.5	80.8	78.1	73.1	60.7
2000	67.2	70.5	73.2	74.8	76.8	78.9	79.8	78.9	75.3	69.9	56.3
2500	65.2	68.7	72.2	73.4	75.2	77.3	77.6	76.6	72.5	65.8	50.9
3150	62.2	66.1	68.8	71.2	72.6	74.3	74.3	73.6	68.4	61.6	44.6
4000	58.6	63.4	66.3	68.5	70.6	71.3	71.1	68.7	64.2	55.4	38.4
5000	56.3	61.1	64.7	66.7	68.2	69.3	68.9	66.1	61.6	52.6	31.3
6300	52.0	56.9	60.8	62.4	64.4	65.4	[illegible]	61.4	55.1	45.1	21.1
8000	46.6	53.8	55.7	57.5	59.5	66.2	59.1	55.2	48.4	36.8	11.7
10000	36.7	42.4	46.9	49.5	56.7	56.5	48.0	44.3	35.3	21.5	0.0
OASPL	86.5	88.4	89.8	91.1	92.5	94.3	96.2	98.3	100.7	101.3	93.2
PNL	92.7	95.5	97.6	99.4	101.6	102.9	104.0	104.8	105.4	104.9	97.0

460. SIDELINE

PNL	105.4	108.2	110.2	112.6	113.7	115.7	116.4	117.2	116.8	114.2	108.4

2000. SIDELINE

PNL	86.3	88.9	90.1	92.3	93.9	95.0	97.7	98.2	99.0	96.5	90.0

4000. SIDELINE

PNL	78.8	79.5	81.2	82.7	84.1	85.9	87.6	88.8	90.2	89.6	81.2

6000. SIDELINE

PNL	70.9	73.5	75.2	76.6	78.0	79.7	81.3	82.8	84.7	83.6	74.8

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Flow Simulation; Configuration 3A; Condition 5710

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 765307 TEST DATE 11/10/76 SCALE RATIO 7.0/1 RUN NUMBER 2057 CONDITION 5710

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S	[illegible]	[illegible]	KG/S	[illegible]	[illegible]
P.R.		2.11	2.00		2.11	2.00	THRUST,IDL LB			N		
TEMP	(R)	1611.0	760.0	(K)	895.0	388.9	THRUST,MEA LB	[illegible]		N		[illegible]
RHO	LB/FT3	0.030	0.069	KG/M3	0.479	1.110	AREA (MOD) SQFT			SQM		
VEL	FPS	1939.8	1229.0	M/S	591.2	374.6	W (MODEL) LB/S	[illegible]	[illegible]	KG/S	[illegible]	[illegible]

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - [illegible]

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PWL
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.100	81.9	86.3	88.1	88.3	89.2	89.3	90.9	93.3	94.9	98.6	102.0	[illegible]
.125	84.1	88.6	88.0	88.7	90.9	91.6	90.6	93.9	97.7	100.7	102.6	[illegible]
.160	86.1	90.4	89.1	88.9	88.4	89.0	90.8	93.2	98.6	102.8	104.6	[illegible]
.200	87.4	87.7	89.7	91.0	92.6	92.9	94.9	97.0	102.3	107.1	107.6	[illegible]
.250	88.6	89.3	90.8	92.1	92.4	93.9	95.9	99.3	104.3	109.1	109.6	[illegible]
.315	89.7	91.3	92.8	93.6	94.8	96.7	99.1	103.3	107.5	111.6	113.5	[illegible]
.400	92.7	94.4	95.7	96.7	98.4	99.6	102.1	106.6	111.7	115.2	116.9	[illegible]
.500	95.9	96.3	96.8	97.6	98.4	100.4	103.1	107.8	114.3	117.9	116.1	[illegible]
.630	98.8	98.1	98.9	100.0	100.8	102.3	105.7	111.0	116.3	119.4	115.7	[illegible]
.800	98.1	99.4	99.1	101.6	101.9	103.0	105.7	111.6	117.5	120.3	117.8	[illegible]
1.00	99.6	100.6	100.3	101.6	102.9	105.6	108.2	113.0	118.6	120.0	117.6	[illegible]
1.25	99.7	100.9	102.1	102.8	104.5	105.6	106.9	113.2	118.6	120.6	117.3	[illegible]
1.60	100.9	101.8	102.5	102.9	104.4	106.3	109.1	113.6	117.6	120.9	118.1	[illegible]
2.00	100.1	101.1	101.8	102.7	104.0	106.0	109.3	112.7	116.3	120.0	117.1	[illegible]
2.50	99.2	100.3	101.1	102.6	104.2	106.4	109.8	112.7	115.4	116.9	115.4	[illegible]
3.15	98.6	99.6	100.9	102.1	103.6	106.5	109.7	117.1	114.2	117.2	113.6	[illegible]
4.00	97.8	99.4	100.6	102.0	103.8	106.7	109.7	111.8	113.3	115.4	110.6	[illegible]
5.00	97.5	98.8	99.0	101.5	103.6	106.6	109.3	110.0	112.6	113.1	107.9	[illegible]
6.30	97.2	98.5	99.7	101.5	103.5	105.4	109.1	110.4	111.0	111.3	105.6	[illegible]
8.00	95.9	98.1	95.6	101.4	103.2	.06.3	108.8	109.8	110.4	109.3	103.6	[illegible]
10.0	95.6	97.5	99.2	101.0	102.9	105.9	108.1	109.1	109.1	107.6	101.5	[illegible]
12.5	94.5	96.8	98.9	100.4	102.5	105.2	107.3	108.3	107.3	105.9	99.6	[illegible]
16.0	93.7	96.1	97.9	100.0	102.0	104.6	106.4	107.3	106.3	104.3	97.5	[illegible]
20.0	92.1	94.8	96.8	98.7	100.8	103.2	104.7	105.5	104.1	102.3	95.0	[illegible]
25.0	90.6	94.1	96.0	98.0	99.0	102.1	103.4	103.4	102.9	100.6	93.1	[illegible]
31.5	89.2	92.1	94.8	96.6	98.4	100.5	101.9	102.0	101.0	98.9	90.7	[illegible]
40.0	87.3	90.3	93.2	94.9	96.8	98.9	100.1	100.2	99.1	97.1	88.4	[illegible]
50.0	84.7	87.8	90.4	91.9	94.3	96.1	97.4	97.4	96.4	95.6	87.7	[illegible]
63.0	81.5	84.6	87.2	89.2	90.9	92.6	94.0	94.5	93.4	92.7	86.2	[illegible]
80.0	77.9	81.1	83.7	85.1	87.6	89.3	90.6	91.1	90.8	90.6	85.5	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OSPL	110.5	111.6	112.0	114.2	115.0	118.7	120.0	123.7	127.4	130.0	127.4	

OAPWL = 144.9

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 765307 TEST DATE 11/10/76 SCALE RATIO 7.0/1 RUN NUMBER 2057 CONDITION 5710

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S	150.4	160.7	KG/S	68.2	72.9
P.R.		2.11	2.00		2.11	2.00	THRUST,IDL LB			N		
TEMP	(R)	1611.0	760.0	(K)	895.0	388.9	THRUST,MEA LB	[illegible]		N		[illegible]
RHO	LB/FT3	0.030	0.069	KG/M3	0.479	1.110	AREA (MOD) SQFT			SQM		
VEL	FPS	1939.8	1229.0	M/S	591.2	374.6	W (MODEL) LB/S	[illegible]	[illegible]	KG/S	[illegible]	[illegible]

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	67.2	69.5	71.4	72.5	73.4	74.9	76.6	79.7	82.3	84.2	82.7
63	70.2	72.6	74.3	75.4	77.0	78.0	79.6	83.0	86.5	87.8	86.1
80	73.4	74.5	75.4	76.3	77.6	78.6	80.6	84.2	89.1	90.5	85.3
100	76.1	76.2	77.4	78.6	79.1	80.4	83.0	87.2	90.9	91.6	84.5
125	75.4	77.5	77.6	79.6	80.4	81.1	83.0	87.8	92.1	92.7	86.6
160	76.8	77.9	78.7	80.1	81.3	83.5	85.4	89.1	93.1	92.9	86.1
200	76.9	78.8	80.5	81.3	82.9	83.5	86.1	89.3	93.1	92.7	85.0
250	77.5	79.6	80.8	81.3	82.7	84.1	86.2	88.9	91.9	92.8	86.3
315	76.9	78.7	79.8	80.9	82.6	81.6	86.1	88.3	90.2	91.4	84.6
400	75.9	77.8	79.0	80.7	82.1	81.9	86.5	88.2	89.2	90.1	82.5
500	75.0	77.0	78.6	80.0	81.5	83.7	86.1	87.3	87.6	88.0	80.1
630	74.6	76.4	77.9	79.6	81.3	83.7	85.9	86.7	86.4	85.7	76.4
800	73.3	75.4	76.9	78.8	80.7	83.2	85.1	85.3	85.1	82.7	72.6
1000	72.5	74.7	76.4	76.3	80.2	82.6	84.4	84.3	83.4	80.0	69.0
1250	70.7	73.8	75.8	77.8	79.4	82.6	83.6	83.1	81.5	77.1	65.6
1600	68.9	72.4	74.7	76.7	78.4	80.8	82.0	81.4	79.0	73.8	61.2
2000	67.5	70.9	73.6	75.3	77.2	79.3	80.3	79.6	76.0	70.5	56.9
2500	65.5	69.1	71.6	73.9	75.7	77.6	78.2	77.2	73.3	66.7	51.5
3150	62.4	66.3	69.2	71.4	73.2	74.9	75.6	73.7	69.6	61.9	44.7
4000	59.1	63.9	66.7	69.0	70.5	71.9	71.7	69.3	65.8	56.4	37.2
5000	56.7	61.3	64.9	67.0	68.5	69.7	69.4	66.9	61.8	53.0	31.9
6300	52.4	57.3	61.3	63.3	64.9	65.9	65.2	62.2	56.3	46.2	21.9
8000	46.9	52.2	56.8	57.9	59.9	60.5	59.6	56.6	49.2	36.1	11.9
10000	36.9	43.6	47.2	49.7	50.9	51.0	49.9	45.2	30.4	22.7	0.0
OASPL	84.8	88.7	90.1	91.5	92.9	94.7	96.7	98.8	101.4	101.7	93.5
PNL	93.0	95.8	97.9	99.8	101.4	103.3	104.5	105.1	105.0	105.0	97.3
400. SIDELINE											
PNL	105.7	108.5	110.6	112.5	114.1	116.1	117.4	117.8	117.5	116.8	109.3
2000. SIDELINE											
PNL	86.7	89.5	91.6	92.7	94.3	96.2	97.7	98.8	99.8	99.0	91.1
4000. SIDELINE											
PNL	77.2	79.6	81.5	83.1	84.6	86.3	88.1	89.3	91.6	90.1	81.6
8000. SIDELINE											
PNL	71.3	73.9	75.5	77.0	78.4	80.0	81.9	83.4	83.6	84.3	75.6

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Shallow Scalloped Long Flowpath Mixer Without Engine Secondary
Flow Simulation; Configuration 3A; Condition 5711

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 705307 TEST DATE 11/10/76 SCALE RATIO 7.0/1 RUN NUMBER 20057 CONDITION 5711

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		2.33	2.01		2.33	2.01	THRUST,IDL	LB			N		
TEMP	(R)	1610.0	706.0	(K)	894.4	392.2	THRUST,MEA	LB		0.0	N		0.0
RHO	LB/FT3	0.036	0.069	KG/M3	0.576	1.103	AREA (MOD)	SQFT			SQM		
VEL	FPS	1957.3	1241.3	M/S	596.6	378.3	W (MODEL)	LB/S	3.1	3.3	KG/S	1.4	1.5

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS RAW CORRECTED SPL - (NO GAL)

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	POWER
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	82.3	86.0	88.1	88.6	89.5	89.4	91.1	93.7	95.0	98.7	102.7	115.1
.125	84.4	87.2	88.4	89.1	91.3	91.4	94.5	94.1	98.0	101.1	103.1	116.9
.160	88.1	90.9	89.4	89.4	88.7	89.1	91.1	93.3	98.7	103.1	103.1	[illegible]
.200	87.9	88.2	90.0	91.3	93.1	93.0	95.2	97.6	102.0	107.3	106.3	[illegible]
.250	89.3	89.0	91.3	92.6	93.1	94.3	96.4	99.0	104.7	104.5	110.0	[illegible]
.315	90.2	91.4	93.2	94.2	95.4	97.6	99.3	103.7	107.9	[illegible]	113.9	[illegible]
.400	93.1	94.0	96.1	97.6	98.0	100.1	102.5	106.9	112.6	115.0	117.1	[illegible]
.500	96.1	96.6	97.2	97.6	98.0	100.9	103.6	108.3	114.6	118.3	116.3	[illegible]
.630	99.1	98.4	99.2	100.2	100.0	102.6	106.6	111.3	116.7	119.7	116.0	[illegible]
.800	98.2	99.4	99.4	101.5	102.2	103.7	105.9	112.0	118.0	120.0	118.0	[illegible]
1.00	99.8	100.3	100.6	101.9	103.3	105.0	108.6	113.6	119.2	121.3	117.9	[illegible]
1.25	100.2	101.3	102.3	102.9	104.5	106.0	109.2	113.9	119.4	121.0	117.7	[illegible]
1.60	100.7	102.2	102.7	103.7	104.6	106.7	109.3	113.4	118.4	121.4	118.4	135.0
2.00	100.4	101.3	102.2	103.6	104.3	106.4	109.7	113.1	117.0	120.6	117.3	[illegible]
2.50	99.6	100.7	101.6	102.9	104.5	106.8	110.6	113.6	116.1	119.6	115.7	[illegible]
3.15	99.0	100.7	101.2	102.4	104.7	106.7	110.6	117.6	115.1	117.7	113.6	137.9
4.00	98.3	99.0	100.8	102.3	104.2	107.1	110.0	112.2	114.2	116.1	111.0	[illegible]
5.00	98.3	99.3	100.2	101.8	104.1	106.9	109.9	111.3	113.3	113.7	108.3	[illegible]
6.30	98.3	99.3	100.3	101.8	104.0	106.7	109.6	110.9	112.4	111.9	106.0	[illegible]
8.00	96.7	98.0	100.2	101.7	103.6	106.6	109.1	110.3	111.2	110.0	104.2	[illegible]
10.0	95.7	98.1	99.8	101.5	103.5	106.2	108.5	109.6	109.7	108.5	102.5	120.5
12.5	95.2	97.5	99.4	100.9	103.0	105.7	107.7	108.0	108.1	106.9	100.4	[illegible]
16.0	94.4	96.6	98.4	100.4	102.5	105.1	106.8	107.9	107.0	105.3	98.5	[illegible]
20.0	92.6	95.3	97.2	99.2	101.1	103.8	105.3	106.3	104.9	103.1	95.0	125.0
25.0	91.4	94.6	96.4	98.3	100.2	102.6	103.9	104.1	103.7	101.6	93.9	123.6
31.5	89.8	92.7	95.3	97.1	99.0	101.0	102.7	102.6	101.7	99.8	91.6	[illegible]
40.0	87.9	90.9	93.7	95.4	97.4	99.4	100.4	100.9	99.7	98.0	89.2	120.4
50.0	85.4	88.3	90.8	92.5	94.7	96.7	98.0	98.1	97.2	95.9	88.3	[illegible]
63.0	82.2	85.0	87.7	89.8	91.6	93.1	95.0	95.2	94.3	93.7	86.7	116.7
80.0	78.5	81.7	84.3	85.6	88.3	90.6	91.4	92.0	91.8	91.4	85.0	113.0
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

OAPWL = 145.4

OASPL	110.9	112.2	113.2	114.5	116.2	118.5	121.2	124.2	128.0	130.5	127.6

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 P/S ID 705307 TEST DATE 11/10/76 SCALE RATIO 7.0/1 RUN NUMBER 20057 CONDITION 5711

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	153.9	161.2	KG/S	69.8	73.1
P.R.		2.33	2.01		2.33	2.01	THRUST,IDL	LB			N		
TEMP	(R)	1610.0	706.0	(K)	894.4	392.2	THRUST,MEA	LB		0.0	N		0.0
RHO	LB/FT3	0.036	0.069	KG/M3	0.576	1.103	AREA (MOD)	SQFT			SQM		
VEL	FPS	1957.3	1241.3	M/S	596.6	378.3	W (MODEL)	LB/S	3.1	3.3	KG/S	1.4	1.5

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	67.7	69.6	71.6	72.9	74.0	75.2	76.0	80.1	87.7	84.7	83.1
63	70.6	73.0	74.7	75.7	77.4	76.3	80.0	83.3	86.6	88.2	86.6
80	73.6	74.0	75.0	76.3	77.4	79.1	81.1	84.7	89.4	90.9	87.3
100	76.4	76.5	77.7	78.0	79.3	80.9	83.3	87.5	91.3	92.1	89.0
125	79.5	77.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
160	77.0	78.7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
200	77.4	79.2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
250	77.8	80.6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
315	77.3	78.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
400	76.3	78.2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
500	75.4	77.4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
630	74.5	76.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
800	74.1	75.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1000	73.0	75.3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1250	71.5	74.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1600	69.6	73.0	75.3	77.2	79.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2000	68.2	71.6	74.1	75.8	77.7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2500	66.7	69.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3150	62.0	67.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4000	59.7	64.4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5000	57.3	61.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6300	53.0	57.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8000	47.6	52.7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10000	37.6	43.4	43.7	50.3	51.6	51.3	56.4	45.9	37.3	23.7	0.0
OASPL	87.2	89.1	90.4	91.8	93.2	95.6	97.1	99.3	102.0	102.7	95.7
PNL	95.5	96.3	98.4	100.7	101.6	103.7	104.9	105.6	108.5	103.6	97.7

400. SIDELINE

PNL	106.3	109.6	111.0	112.0	114.0	116.5	117.6	116.4	118.3	117.4	109.6

2000. SIDELINE

PNL	87.2	89.7	91.5	93.1	[illegible]	96.6	98.1	99.2	100.5	99.6	91.5

4000. SIDELINE

PNL	77.9	80.3	81.9	83.5	84.9	86.6	88.4	89.8	91.7	90.8	81.9

6000. SIDELINE

PNL	71.7	74.3	75.9	77.3	78.6	80.4	82.2	83.9	86.1	84.6	75.3

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Shallow Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 3A; Condition 5712

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 705307 TEST DATE 11/10/76 SCALE RATIO [illegible] RUN NUMBER 20057 CONDITION 5712

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	[illegible]	[illegible]	KG/S	[illegible]	[illegible]
P.R.		1.51	1.36		1.31	1.36	THRUST,IDL	LB			N		
TEMP	(R)	1251.0	610.0	(K)	695.0	338.9	THRUST,MEA	LB	0.0		N	0.0	
RHO	LB/FT3	0.034	0.071	KG/M3	0.549	1.144	AREA (MOD)	SQFT			SQM		
VEL	FPS	1051.8	782.3	M/S	320.6	238.5	W (MODEL)	LB/S	1.5	2.4	KG/S	0.7	1.1

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS RAW CORRECTED SPL - (ANGLE)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PWL
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	67.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.125	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.160	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.200	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.315	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.400	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.630	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.800	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.60	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3.15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6.30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
12.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
40.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
50.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
63.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
80.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	92.6	93.6	94.9	96.0	96.8	98.8	102.6	102.1	103.4	104.7	103.0	

OAPWL = 177.3

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 705307 TEST DATE 11/10/76 SCALE RATIO 7.0/1 RUN NUMBER 20057 CONDITION 5712

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	75.5	115.2	KG/S	34.2	52.2
P.R.		1.51	1.36		1.51	1.36	THRUST,IDL	LB			N		
TEMP	(R)	1251.0	610.0	(K)	695.0	338.9	THRUST,MEA	LB	0.0		N	0.0	
RHO	LB/FT3	0.034	0.071	KG/M3	0.549	1.144	AREA (MOD)	SQFT			SQM		
VEL	FPS	1051.8	782.3	M/S	320.6	238.5	W (MODEL)	LB/S	1.5	2.4	KG/S	0.7	1.1

FAA DAY

1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	53.3	55.1	56.5	57.7	58.3	59.9	61.3	63.5	65.6	66.0	63.9
63	54.8	57.0	59.3	60.3	61.0	62.9	63.9	65.7	67.3	68.4	66.8
80	56.7	58.1	59.2	60.6	62.0	62.6	64.2	66.0	68.3	68.9	65.0
100	57.3	58.9	60.0	61.4	62.1	63.7	65.5	67.3	68.2	68.5	67.5
125	56.0	59.3	60.1	61.7	62.0	63.0	65.1	66.0	68.1	67.6	62.5
160	56.9	58.8	60.4	62.1	62.7	64.5	66.1	67.3	67.0	65.9	58.2
200	56.5	59.0	60.0	61.7	62.0	64.5	66.2	67.3	67.1	63.9	55.5
250	56.3	59.0	60.8	61.0	62.7	64.6	66.1	66.7	66.1	62.6	53.0
315	55.9	59.2	60.0	61.9	62.7	64.5	65.0	66.4	64.7	60.3	51.2
400	56.2	59.4	61.1	62.3	63.6	64.0	65.9	66.1	64.6	58.9	49.3
500	56.4	58.9	60.0	62.2	62.0	64.4	65.3	65.1	62.5	57.0	47.7
630	56.7	59.6	60.7	61.9	62.7	64.2	65.1	64.4	61.2	55.6	45.7
800	56.4	58.0	59.8	61.1	61.8	63.5	64.0	62.8	59.3	53.2	42.8
1000	55.1	57.2	[illegible]	60.2	61.1	62.3	62.9	61.3	57.4	51.6	39.0
1250	52.9	56.0	[illegible]	59.3	60.1	61.4	61.6	59.7	55.4	48.5	36.7
1600	51.4	54.5	56.6	57.9	58.5	59.9	59.8	57.4	52.8	45.2	32.5
2000	50.3	52.8	54.9	56.1	56.9	58.1	57.7	55.1	49.6	41.8	28.0
2500	48.7	50.6	52.8	54.3	54.9	55.9	55.6	52.5	46.5	38.6	22.5
3150	45.1	47.8	50.0	51.9	52.8	52.8	52.0	48.7	42.2	33.6	15.5
4000	41.8	45.2	47.5	48.9	49.4	49.6	48.8	44.3	38.3	27.4	8.1
5000	39.5	42.9	45.6	46.0	47.6	47.5	46.5	41.0	34.9	24.1	[illegible]
6300	35.0	38.8	41.8	43.1	43.0	43.6	42.3	37.1	29.4	17.5	6.6
8000	29.5	33.6	36.7	37.6	38.6	38.2	36.4	31.3	22.8	10.3	0.0
10000	19.6	24.2	27.8	29.5	29.9	28.8	28.4	26.4	16.2	6.6	0.0
OASPL	68.1	70.4	72.1	73.3	74.0	75.7	76.8	77.4	77.4	76.3	71.9
PNL	74.3	77.6	79.1	80.4	81.1	82.4	82.8	82.2	79.8	75.4	67.1

600. SIDELINE											
PNL	67.5	89.9	91.9	93.7	93.9	95.2	95.6	96.3	97.0	88.6	88.1
2000. SIDELINE											
PNL	67.3	70.3	72.2	73.6	74.3	75.0	76.4	75.9	73.5	69.0	66.5
4000. SIDELINE											
PNL	57.3	60.0	62.8	64.0	64.7	66.2	66.0	66.4	64.0	59.6	50.7
6000. SIDELINE											
PNL	50.6	54.2	56.3	57.7	58.4	59.9	60.6	60.1	57.9	53.6	43.9

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 4A; Condition 6111

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 705307 TEST DATE 11/29/76 SCALE RATIO 7.0/1 RUN NUMBER [illegible] CONDITION 6111

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		1.31	1.36		1.31	1.36	THRUST,IDL LB			N		
TEMP	(R)	1259.6	614.6	(K)	699.4	341.1	THRUST,MEA LB	0.0		N	0.0	
RHO	LB/FT3	0.036	0.071	KG/M3	0.566	1.139	AREA (MOD) SQFT			SQM		
VEL	FPS	1065.6	791.3	M/S	324.6	241.2	W (MODEL) LB/S	1.6	2.3	KG/S	0.7	1.1

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL – [illegible]

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PNDB 60-120
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	68.4	72.6	74.1	75.6	75.4	76.0	77.7	80.4	81.7	85.2	89.7	[illegible]
.125	71.1	75.4	75.4	75.0	76.6	77.7	78.6	80.1	83.6	86.5	89.1	[illegible]
.160	73.3	73.9	74.9	75.9	75.5	75.9	77.6	79.1	83.6	88.3	91.1	[illegible]
.200	72.5	73.7	75.2	76.7	78.6	79.6	80.9	83.1	87.8	92.2	94.2	[illegible]
.250	73.9	75.5	76.6	78.6	79.4	80.6	82.3	85.4	89.3	93.8	95.5	[illegible]
.315	76.4	77.3	78.2	79.4	81.1	82.2	84.2	87.6	91.6	95.5	98.1	[illegible]
.400	78.5	79.7	81.3	82.5	83.7	85.1	87.1	90.3	93.9	98.3	101.4	[illegible]
.500	80.4	80.6	81.3	82.7	83.9	85.2	87.3	90.3	95.0	99.1	100.0	[illegible]
.630	81.6	81.7	82.9	83.8	85.3	86.7	89.1	92.0	95.1	99.0	98.6	[illegible]
.800	80.6	81.7	81.9	84.0	85.4	86.5	88.5	91.6	94.9	98.0	98.0	[illegible]
1.00	80.5	81.5	82.4	84.3	86.6	87.6	89.5	92.3	94.5	96.5	96.4	[illegible]
1.25	80.3	82.6	82.8	84.3	86.5	87.5	89.0	92.3	94.1	94.6	91.4	[illegible]
1.60	80.4	81.7	83.0	84.3	86.8	87.6	89.7	92.2	93.2	93.4	89.7	[illegible]
2.00	80.1	82.0	83.2	84.5	87.6	88.6	89.8	91.9	92.4	91.3	87.4	[illegible]
2.50	80.5	82.1	83.4	84.9	87.4	88.2	89.9	91.7	91.8	90.1	86.6	[illegible]
3.15	80.6	82.3	83.6	85.1	87.5	88.3	89.9	91.1	90.7	88.4	85.2	[illegible]
4.00	81.3	82.4	83.5	85.0	87.9	88.5	90.1	90.8	90.1	87.8	83.9	[illegible]
5.00	81.4	81.8	83.1	84.6	87.5	88.1	89.4	89.9	88.9	86.5	82.3	[illegible]
6.30	80.9	81.5	82.6	84.3	87.2	87.7	89.6	89.2	87.9	85.4	81.6	[illegible]
8.00	79.1	81.0	82.3	83.7	86.8	87.2	88.5	88.2	86.7	84.6	79.7	[illegible]
10.0	78.6	80.3	81.6	83.2	86.3	86.5	87.7	87.3	85.3	82.5	78.0	[illegible]
12.5	79.1	81.4	84.3	87.1	90.3	91.2	89.2	86.6	84.1	81.2	76.1	[illegible]
16.0	76.8	77.8	79.6	81.6	84.4	84.6	85.4	84.7	82.0	79.0	73.5	[illegible]
20.0	74.8	76.2	78.0	79.7	82.5	82.7	83.2	82.3	80.0	76.8	72.7	[illegible]
25.0	73.8	75.3	76.9	78.6	81.3	81.4	82.6	86.3	78.5	74.7	69.2	[illegible]
31.5	72.0	73.5	75.7	77.0	80.6	79.9	80.5	78.8	76.5	73.0	68.3	[illegible]
40.0	70.7	71.9	74.2	75.4	78.7	78.1	78.5	77.2	74.9	71.7	67.9	[illegible]
50.0	68.7	70.1	72.0	73.6	76.7	75.9	76.1	75.4	73.1	70.4	69.4	[illegible]
63.0	66.3	67.5	69.3	70.8	73.7	73.0	73.5	72.7	71.6	76.2	71.2	[illegible]
80.0	63.8	64.7	66.5	67.5	70.9	70.7	70.5	70.4	70.4	69.6	71.6	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	93.0	94.2	95.5	97.1	99.6	100.3	101.7	103.3	104.9	107.2	107.8	

OAPWL = 124.1

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 705307 TEST DATE 1/29/76 SCALE RATIO 7.0/1 RUN NUMBER [illegible] CONDITION 6111

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S	80.8	119.2	KG/S	36.7	54.8
P.R.		1.31	1.36		1.31	1.36	THRUST,IDL LB			N		
TEMP	(R)	1259.6	614.6	(K)	699.4	341.1	THRUST,MEA LB	0.0		N	0.0	
RHO	LB/FT3	0.036	0.071	KG/M3	0.566	1.139	AREA (MOD) SQFT			SQM		
VEL	FPS	1065.0	791.3	M/S	324.6	241.2	W (MODEL) LB/S	1.6	2.3	KG/S	0.7	1.1

FAA DAY — 1/3 OCTAVE BAND — 1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	53.9	55.5	56.6	58.1	59.7	60.4	61.7	64.0	65.8	68.1	67.3
63	56.0	57.9	59.9	61.2	62.3	63.3	64.6	66.7	68.7	70.9	70.6
80	57.9	58.8	59.9	61.4	62.5	63.4	64.8	66.7	69.8	71.7	69.2
100	58.9	59.8	61.4	62.4	63.8	64.8	66.4	68.2	69.7	71.4	67.4
125	57.9	59.8	60.4	62.6	63.9	64.6	65.8	67.8	69.5	70.4	66.8
160	57.7	59.4	60.8	62.8	65.0	65.5	66.7	68.4	69.6	66.6	62.9
200	57.5	59.5	61.2	62.8	64.9	65.4	67.0	68.4	68.6	66.7	59.9
250	57.5	59.5	61.3	62.7	65.1	65.4	66.8	68.1	67.5	65.3	57.9
315	56.9	59.6	61.2	62.7	65.0	65.6	66.6	67.5	66.3	62.7	54.9
400	57.2	59.6	61.3	63.6	65.5	65.7	66.6	67.2	65.6	61.5	53.1
500	57.0	59.5	61.3	63.0	65.2	65.5	66.3	66.3	64.1	59.7	51.7
630	57.5	59.4	61.0	62.6	65.4	65.3	66.3	65.7	63.2	58.1	49.7
800	57.2	58.4	60.2	61.9	64.6	64.7	65.2	64.4	61.4	56.1	47.0
1000	56.2	57.7	59.3	61.1	63.9	63.9	64.3	63.1	59.7	54.1	44.4
1250	53.9	56.7	58.5	66.1	63.0	67.9	63.1	61.5	57.8	51.8	41.7
1600	52.5	55.6	57.1	58.9	61.6	61.4	61.6	59.6	55.2	46.7	37.7
2000	52.1	55.5	59.0	62.0	65.0	65.3	62.2	57.9	52.8	45.8	33.4
2500	48.6	50.8	53.3	55.5	58.1	57.6	57.2	54.6	49.8	41.4	27.5
3150	45.1	47.9	50.4	52.4	54.9	54.4	53.5	50.5	44.9	36.4	20.4
4000	42.1	45.1	47.6	49.6	52.6	51.2	50.3	46.2	40.6	30.5	13.3
5000	39.5	42.7	45.8	47.4	50.7	49.1	47.8	43.7	37.3	27.1	9.5
6300	35.8	38.9	42.3	43.8	46.6	45.1	43.6	39.2	32.1	20.8	1.4
8000	30.9	34.5	37.6	39.0	42.3	40.3	38.3	34.0	25.9	13.5	0.0
10000	21.7	25.9	24.3	31.3	33.7	31.4	28.9	23.4	14.6	6.2	0.0
OASPL	69.1	71.6	72.6	74.3	76.6	76.9	77.0	78.6	78.8	79.6	76.6
PNL	75.5	78.2	80.0	83.1	85.0	85.9	85.0	83.6	81.7	78.5	72.0
400. SIDELINE PNL	86.5	90.9	93.4	95.6	98.4	98.5	97.7	96.1	93.9	91.1	85.1
2000. SIDELINE PNL	68.3	71.1	73.8	76.1	78.0	76.6	77.[illegible]	77.3	75.3	72.1	65.5
4000. SIDELINE PNL	58.4	61.1	63.2	65.0	67.5	67.5	67.9	67.7	65.7	62.7	55.9
6000. SIDELINE PNL	51.8	54.7	56.8	58.8	61.2	51.3	61.6	61.4	59.7	56.7	49.5

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 4A; Condition 6112

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 705307 TEST DATE 11/29/76 SCALE RATIO 7.0/1 RUN NUMBER 20061 CONDITION 6112

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		1.45	1.47		1.45	1.47	THRUST,IDL	LB			N		
TEMP	(R)	1297.0	617.0	(K)	720.6	342.8	THRUST,MEA	LB		0.0	N		0.0
RHO	LB/FT3	0.034	0.072	KG/M3	0.544	1.157	AREA (MOD)	SQFT			SQM		
VEL	FPS	1255.6	880.0	M/S	382.7	268.2	W (MODEL)	LB/S	2.0	2.0	KG/S	0.9	1.2

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — PWR CORRECTION SPL - (NONE)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PWL(M) DB-RE
	MICROPHONE ANGLES IN DEGREES											
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	71.6	73.6	77.9	78.6	78.6	79.1	86.6	83.6	86.9	88.9	93.7	115.4
.125	74.3	76.0	78.8	78.6	80.6	81.5	86.6	83.6	87.6	90.6	93.2	106.0
.160	77.2	78.6	78.9	79.6	78.7	79.2	86.6	82.6	87.6	92.6	95.5	107.6
.200	78.6	77.6	78.9	80.7	82.6	82.6	84.7	86.6	91.7	96.6	98.7	111.1
.250	77.8	79.1	80.2	87.6	83.6	83.7	85.9	88.9	93.3	98.0	100.	117.0
.315	80.2	80.9	81.8	83.0	84.5	85.7	86.6	91.7	95.6	100.1	103.3	113.6
.400	82.3	82.7	85.6	86.2	88.6	89.6	91.1	94.5	98.8	103.5	106.7	120.3
.500	84.6	85.6	85.6	86.2	88.2	89.6	91.6	95.2	100.6	105.1	105.9	119.6
.630	87.6	86.6	87.3	88.6	89.7	91.1	93.7	97.1	101.6	105.5	105.9	119.7
.800	85.6	86.6	86.5	86.5	90.3	91.0	93.0	96.9	100.9	104.7	105.6	119.3
1.00	85.5	85.9	86.8	86.5	90.8	92.1	94.3	97.5	100.5	102.9	102.1	116.3
1.25	86.7	85.7	87.7	88.6	91.6	92.6	94.7	97.6	100.0	100.6	98.7	117.6
1.60	86.6	85.7	87.1	88.6	91.3	92.6	94.7	97.5	99.3	99.3	96.6	0.0
2.00	86.2	86.1	87.3	88.7	91.5	92.6	94.7	97.3	98.0	97.2	94.6	116.1
2.50	86.6	86.6	87.7	89.2	91.8	92.6	94.9	97.0	97.6	95.7	91.9	113.0
3.15	84.8	86.6	87.6	89.3	92.1	93.0	94.6	96.3	96.6	94.2	91.0	[illegible]
4.00	85.5	86.3	87.0	89.3	92.1	93.0	95.1	96.1	95.6	94.3	89.6	115.2
5.00	85.7	86.3	87.5	89.2	92.2	92.9	94.7	95.6	94.6	92.3	88.3	116.7
6.30	83.3	85.9	87.6	88.6	92.0	92.6	94.2	94.6	93.7	91.6	87.5	114.2
8.00	83.6	85.5	86.9	88.6	91.6	92.2	93.7	94.0	92.7	90.6	86.5	113.6
10.0	83.8	84.5	86.2	87.9	91.1	91.5	92.9	92.9	91.2	89.3	84.6	117.7
12.5	83.6	83.1	87.6	89.5	92.9	92.5	92.6	91.6	89.6	87.6	82.9	113.2
16.0	81.8	82.8	84.6	86.5	89.7	90.6	90.8	90.5	88.2	85.0	80.6	110.7
20.0	79.8	81.6	83.0	86.6	87.8	88.2	89.0	88.2	86.1	83.6	77.8	100.8
25.0	78.7	80.3	82.0	83.6	86.1	88.7	87.7	86.3	84.5	81.3	75.6	107.5
31.5	76.7	78.3	80.8	82.3	84.6	86.2	86.2	84.9	82.3	79.3	73.9	106.1
40.0	75.6	77.1	79.6	80.9	84.5	84.6	84.6	83.0	80.6	77.7	72.5	109.5
50.0	73.2	74.6	77.1	78.2	82.3	81.5	81.9	80.8	78.6	76.2	72.7	107.2
63.0	70.6	72.1	74.3	76.6	79.1	78.6	79.0	77.9	75.7	75.2	74.1	99.6
80.0	67.6	68.6	71.3	72.6	76.2	75.7	[illegible]	73.6	74.6	76.3	[illegible]	90.0
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	97.5	98.6	99.8	101.4	104.0	104.6	106.5	108.5	110.5	113.1	113.6	

OAPWL = 129.6

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 705307 TEST DATE 11/29/76 SCALE RATIO 7.0/1 RUN NUMBER 20061 CONDITION 6112

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	99.5	124.9	KG/S	45.1	56.7
P.R.		1.45	1.47		1.45	1.47	THRUST,IDL	LB			N		
TEMP	(R)	1297.0	617.0	(K)	720.6	342.8	THRUST,MEA	LB		0.0	N		0.0
RHO	LB/FT3	0.034	0.072	KG/M3	0.544	1.157	AREA (MOD)	SQFT			SQM		
VEL	FPS	1255.6	880.0	M/S	382.7	268.2	W (MODEL)	LB/S	2.0	2.0	KG/S	0.9	1.2

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	57.7	59.1	60.4	61.7	63.1	63.9	65.5	68.1	70.4	72.7	72.5
63	59.8	61.9	64.0	64.9	66.6	67.6	68.6	70.9	73.6	76.1	75.9
80	62.3	63.3	64.2	65.6	66.8	67.6	69.1	71.6	75.4	77.7	75.1
100	64.3	64.7	65.8	67.0	68.2	69.2	71.0	73.3	75.6	77.9	74.3
125	62.7	64.7	65.0	67.1	68.8	69.1	70.3	73.1	75.5	77.1	74.4
160	62.7	63.8	65.2	67.0	69.2	70.0	71.5	73.6	75.0	75.0	70.6
200	61.9	63.8	65.6	66.9	69.4	70.0	71.9	73.7	74.5	72.9	67.2
250	61.7	63.7	65.4	66.8	69.6	70.2	71.0	73.4	73.3	71.4	64.6
315	61.0	63.7	65.3	66.9	69.5	70.2	71.5	72.9	71.9	68.6	61.3
400	61.3	63.9	65.6	67.3	69.7	70.3	71.6	72.5	71.2	66.9	59.0
500	61.2	63.7	65.5	67.2	69.8	70.2	71.3	71.7	69.8	65.3	57.5
630	61.7	63.7	65.3	67.0	69.8	70.0	71.3	71.0	68.7	63.7	55.7
800	61.5	62.9	64.6	66.5	69.3	69.5	70.5	69.9	67.1	61.9	53.0
1000	60.8	62.8	63.9	65.8	68.7	68.8	69.5	68.5	65.5	60.3	50.9
1250	58.6	61.2	63.1	65.6	67.8	67.9	68.5	67.3	63.8	58.4	48.5
1600	58.9	59.4	61.7	63.6	66.6	66.4	66.8	65.2	61.1	55.5	44.6
2000	56.4	59.2	62.1	64.4	67.6	67.6	65.6	65.1	58.3	52.6	46.2
2500	53.6	55.8	58.1	60.4	63.4	63.0	62.6	60.4	55.2	48.0	34.6
3150	50.1	53.1	55.4	57.5	60.2	59.9	59.3	56.4	51.8	43.0	27.5
4000	47.0	50.1	52.7	54.9	57.4	56.8	56.0	52.2	46.6	37.1	19.7
5000	44.2	47.7	50.9	52.7	56.2	54.6	53.7	49.8	43.1	33.6	15.1
6300	40.5	44.1	47.5	49.3	52.6	51.0	49.5	45.0	37.0	27.0	6.0
8000	35.4	39.2	42.7	44.2	47.9	45.9	44.1	39.4	31.2	19.3	0.0
10000	28.0	30.5	34.3	36.5	39.1	36.8	34.4	28.6	18.7	5.3	0.0
OASPL	73.6	75.4	76.9	78.6	81.0	81.4	82.6	83.8	84.5	85.0	87.2
PNL	80.1	82.6	84.9	87.0	89.9	89.9	89.7	89.2	87.7	85.4	79.9

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
460. SIDELINE											
PNL	93.1	95.3	97.6	99.5	102.4	102.5	102.4	101.7	99.7	97.5	92.4
2000. SIDELINE											
PNL	72.9	75.6	77.9	80.6	82.8	82.8	82.7	82.0	81.4	79.6	73.4
4000. SIDELINE											
PNL	63.0	65.7	67.7	69.5	72.1	72.3	73.1	73.3	72.6	69.7	63.9
6000. SIDELINE											
PNL	56.6	59.4	61.5	63.4	65.8	66.1	66.8	67.1	66.1	63.8	57.9

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 4A; Condition 6113

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 70530T TEST DATE 11/29/76 SCALE RATIO 7.0/1 RUN NUMBER 20661 CONDITION 6113

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	[illegible]	[illegible]	KG/S	[illegible]	[illegible]
P.R.		1.40	1.51		1.40	1.51	THRUST,IDL	LB			N		
TEMP	(R)	1320.0	616.0	(K)	733.3	342.2	THRUST,MEA	LB	0.0		N	0.0	
RHO	LB/FT3	0.034	0.073	KG/M3	0.530	1.160	AREA (MOD)	SQFT		0.05	SQM		
VEL	FPS	1303.2	907.0	M/S	397.2	276.7	W (MODEL)	LB/S	2.1	2.7	KG/S	0.9	1.2

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (PNLdB)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PNdB 15-ft
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	77.0	76.3	78.2	78.0	79.2	79.0	81.3	84.0	85.5	89.0	94.1	[illegible]
.125	75.1	79.7	79.3	79.1	80.0	82.2	81.2	84.5	88.2	91.3	94.2	[illegible]
.160	76.1	80.0	79.4	80.0	79.3	79.0	81.2	83.5	88.4	93.4	96.2	[illegible]
.200	77.1	78.1	79.0	81.3	82.0	83.4	85.2	87.7	92.7	97.6	99.0	[illegible]
.250	78.3	79.0	81.1	82.0	83.7	84.6	86.1	90.1	94.2	99.2	101.3	[illegible]
.315	81.1	81.5	82.5	84.0	85.5	86.6	88.7	92.7	96.4	101.2	104.3	[illegible]
.400	83.3	84.4	85.9	87.1	88.0	90.0	92.2	95.4	99.7	104.3	107.0	[illegible]
.500	85.9	85.9	86.2	87.9	89.0	90.4	92.4	95.9	101.5	106.2	106.9	[illegible]
.630	88.1	87.5	88.3	89.6	90.7	92.1	94.6	98.6	102.2	106.9	106.8	[illegible]
.800	86.4	87.7	87.5	89.6	91.2	92.6	94.6	97.9	102.1	106.4	107.3	[illegible]
1.00	86.6	87.0	87.6	89.4	91.0	92.1	95.4	98.6	101.6	104.5	103.9	[illegible]
1.25	85.0	86.9	88.0	89.4	92.1	93.1	95.6	98.7	101.0	102.2	100.5	[illegible]
1.60	85.7	88.9	88.1	89.4	92.2	93.3	95.7	98.5	100.1	100.8	98.2	[illegible]
2.00	86.2	87.0	88.2	89.7	92.5	93.4	95.7	98.4	99.2	98.5	95.4	[illegible]
2.50	85.7	87.3	88.3	90.1	92.9	93.0	96.2	98.1	98.5	97.0	93.3	[illegible]
3.15	85.0	87.3	88.7	90.2	93.0	94.0	96.1	97.7	97.5	95.9	92.3	[illegible]
4.00	86.0	87.5	88.0	90.3	93.4	94.1	96.3	97.4	96.0	94.0	91.2	[illegible]
5.00	86.6	87.3	88.4	90.2	93.3	94.1	95.9	96.0	95.9	93.7	90.0	[illegible]
6.30	86.3	87.0	88.3	89.9	93.1	94.0	95.6	96.0	95.0	93.1	89.1	[illegible]
8.00	86.0	86.6	87.9	89.7	93.0	93.5	95.1	95.4	94.0	92.3	88.3	[illegible]
10.0	86.2	85.8	87.3	89.1	92.4	92.9	94.4	94.4	93.6	91.0	87.0	[illegible]
12.5	84.4	85.7	88.3	90.8	93.7	93.7	93.9	93.2	91.2	89.1	84.0	[illegible]
16.0	82.7	83.9	85.6	87.9	91.0	91.3	92.4	91.9	89.7	87.3	82.7	[illegible]
20.0	80.7	82.5	84.1	86.0	89.3	89.6	90.4	89.6	87.7	85.1	79.8	[illegible]
25.0	79.0	81.7	83.3	85.2	88.4	88.5	89.2	87.8	86.0	83.1	77.6	[illegible]
31.5	77.9	79.7	82.1	83.8	87.1	87.1	87.8	86.3	83.0	81.3	75.8	[illegible]
40.0	76.4	78.1	80.6	82.2	85.7	85.3	85.9	84.4	82.6	79.5	74.3	[illegible]
50.0	74.3	75.9	78.2	79.7	83.9	82.9	83.3	82.4	79.8	77.8	74.6	[illegible]
63.0	71.5	73.1	75.3	77.1	84.5	79.6	80.5	79.4	77.3	77.1	76.6	[illegible]
80.0	68.3	69.8	72.5	73.6	77.5	76.8	77.2	76.6	75.0	74.2	74.2	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
												UAPNL = [illegible]
OASPL	98.5	99.6	100.7	102.4	105.1	105.0	107.7	109.6	111.6	114.5	115.1	

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 70530T TEST DATE 11/29/76 SCALE RATIO 7.0/1 RUN NUMBER 20661 CONDITION 6113

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	101.9	130.3	KG/S	46.2	59.1
P.R.		1.40	1.51		1.40	1.51	THRUST,IDL	LB			N		
TEMP	(R)	1320.0	616.0	(K)	733.3	342.2	THRUST,MEA	LB	0.0		N	0.0	
RHO	LB/FT3	0.034	0.073	KG/M3	0.530	1.160	AREA (MOD)	SQFT		6.05	SQM		
VEL	FPS	1303.2	907.0	M/S	397.2	276.7	W (MODEL)	LB/S	2.1	2.7	KG/S	0.9	1.2

FAA DAY — 1/3 OCTAVE BAND — 1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	58.6	59.7	61.1	62.7	64.1	64.8	66.2	69.1	71.2	73.8	73.5
63	60.8	62.6	64.5	65.8	67.4	68.2	68.7	71.8	74.5	77.1	77.0
80	63.4	64.1	64.8	66.6	67.6	68.6	69.9	72.3	76.3	76.8	76.1
100	65.4	65.6	66.8	68.2	69.2	70.2	71.9	74.2	76.8	79.3	75.6
125	63.7	65.6	66.0	68.2	69.3	70.1	71.3	74.1	76.7	78.8	76.1
160	63.8	64.9	66.0	67.9	70.2	71.6	72.6	74.7	76.1	76.6	72.4
200	63.0	64.8	66.4	67.9	70.5	71.0	72.8	74.8	75.5	74.3	69.0
250	62.8	64.7	66.4	67.8	70.5	71.1	72.8	74.4	74.4	72.7	66.4
315	62.6	64.6	66.2	67.9	70.5	71.6	72.5	74.6	73.1	69.9	62.9
400	62.4	64.8	66.2	68.2	70.8	71.3	72.9	73.6	72.3	68.2	66.4
500	62.7	64.5	66.4	68.1	70.7	71.2	72.5	72.9	70.9	66.7	58.8
630	62.8	64.5	66.3	67.9	70.9	71.1	72.5	72.3	69.9	65.1	57.6
800	62.4	63.9	65.5	67.5	70.4	70.7	71.7	71.3	68.6	63.3	54.7
1000	61.6	63.2	65.0	66.7	69.8	70.2	70.9	69.9	66.8	61.8	52.5
1250	59.6	62.3	64.1	66.1	69.2	69.2	69.9	68.7	65.1	60.1	50.3
1600	58.1	60.7	62.8	64.8	67.9	67.8	68.3	66.7	62.9	57.2	46.7
2000	57.4	59.8	63.0	65.7	68.4	67.8	66.9	64.5	59.9	53.7	42.1
2500	54.5	56.9	59.3	61.8	64.7	64.5	64.2	61.6	56.7	49.7	36.7
3150	51.0	54.2	56.5	58.7	61.7	61.3	60.7	57.8	52.6	44.7	29.5
4000	48.1	51.5	54.0	56.2	59.1	58.3	57.5	53.7	48.1	38.9	21.7
5000	45.4	48.9	52.2	54.2	57.8	56.3	55.3	51.2	44.6	35.4	17.8
6300	41.5	45.1	48.7	50.6	53.8	52.3	51.0	46.4	39.2	28.6	7.8
8000	36.5	40.3	43.8	45.7	49.5	47.3	45.5	41.0	32.6	20.9	0.0
10000	26.9	31.5	35.3	37.6	40.5	40.6	35.9	30.1	26.3	7.1	0.0
OASPL	74.6	76.3	77.8	79.6	82.0	82.5	83.7	84.8	85.6	86.4	83.5
PNL	81.2	83.5	85.9	88.2	90.9	90.7	91.0	90.4	88.9	87.1	81.7

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
400. SIDELINE PNL	94.1	96.2	98.5	100.7	103.5	103.4	103.7	103.6	101.6	99.1	94.0
2000. SIDELINE PNL	74.0	76.5	78.9	81.1	83.9	83.7	84.0	84.6	87.6	86.7	75.2
4000. SIDELINE PNL	64.1	66.7	68.6	70.6	73.2	73.4	74.3	74.5	73.2	71.6	63.7
6000. SIDELINE PNL	57.8	60.4	62.4	64.4	67.0	67.1	68.1	68.3	67.3	65.5	54.6

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 4A; Condition 6114

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 705307 TEST DATE 11/29/76 SCALE RATIO 7.0/1 RUN NUMBER 20061 CONDITION 61.4

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		1.75	1.71		1.75	1.71
TEMP	(R)	1455.0	640.0	(K)	808.3	340.6
RHO	LB/FT3	0.032	0.072	KG/M3	0.508	1.149
VEL	FPS	1611.5	1052.6	M/S	491.2	320.8

		PRIMARY	FAN		PRIMARY	FAN
MASS FLOW	LB/S	0.0	0.0	KG/S	0.0	0.0
THRUST,IDL	LB			N		
THRUST,MEA	LB	0.0		N	0.0	
AREA (MOD)	SQFT			SQM		
W (MODEL)	LB/S	2.6	2.0	KG/S	1.2	1.3

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS RAW CORRECTED SPL - (MODEL)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	[illegible]
	MICROPHONE ANGLES IN DEGREES											
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	77.6	81.3	83.7	84.2	84.2	84.4	85.8	88.4	90.2	94.6	99.0	110.4
.125	79.5	84.0	83.6	84.2	86.1	86.9	85.4	88.9	97.7	96.2	99.4	112.1
.160	82.9	85.4	84.1	84.6	83.7	83.9	85.6	88.0	93.3	98.3	101.3	114.2
.200	82.1	83.6	86.0	86.6	87.4	88.6	90.1	92.5	97.0	102.9	104.4	117.2
.250	83.5	84.6	85.0	87.7	88.3	89.3	91.4	94.7	99.6	104.5	106.7	119.9
.315	86.0	85.9	87.4	88.0	90.0	91.4	93.7	97.9	102.0	107.0	110.2	121.0
.400	88.3	89.4	90.0	91.0	93.6	94.9	96.9	101.0	105.9	110.7	113.0	125.2
.500	91.5	91.3	91.7	93.0	94.1	95.3	97.9	101.9	108.4	113.1	113.3	126.0
.630	94.1	93.1	94.0	95.2	96.1	97.4	100.3	104.6	109.9	114.4	119.6	[illegible]
.800	92.9	94.6	93.7	95.9	97.2	97.6	99.8	104.9	110.6	115.0	119.0	126.6
1.00	94.0	93.9	94.4	95.8	98.2	99.7	101.9	105.9	110.5	114.6	116.5	128.7
1.25	93.7	94.6	95.4	96.7	98.9	99.6	102.3	106.1	109.8	112.9	113.0	127.7
1.60	93.5	94.5	95.2	96.3	98.8	99.6	102.1	105.7	108.4	111.5	111.8	126.8
2.00	92.5	93.4	94.4	95.7	98.6	99.5	102.3	105.4	107.1	108.3	109.0	[illegible]
2.50	91.8	93.2	94.0	95.9	98.7	99.9	102.7	105.2	106.2	106.3	106.2	[illegible]
3.15	91.6	92.9	94.2	96.0	98.7	100.3	102.7	104.7	105.1	104.8	104.4	[illegible]
4.00	91.8	92.9	94.3	96.0	99.1	100.4	102.9	104.5	104.3	103.4	102.3	[illegible]
5.00	92.0	92.6	93.9	95.9	99.0	100.1	102.4	103.7	103.8	102.2	100.1	122.6
6.30	91.7	92.4	93.7	95.8	98.9	100.0	102.1	103.1	102.6	101.7	98.7	[illegible]
8.00	90.2	92.2	93.5	95.4	98.9	99.7	101.7	102.6	101.9	101.6	97.3	121.7
10.0	89.8	91.5	93.0	95.0	98.4	99.3	101.6	101.6	101.1	99.8	99.8	121.6
12.5	89.6	90.9	93.0	95.6	98.8	99.2	100.3	100.5	99.6	98.4	93.8	120.9
16.0	88.2	89.9	91.6	94.0	97.3	97.9	99.2	99.3	98.5	96.7	91.0	119.1
20.0	86.5	88.7	90.3	92.4	95.8	96.5	97.4	97.4	96.6	94.7	89.2	117.4
25.0	85.4	87.6	89.4	91.7	94.9	95.3	96.3	95.5	95.1	92.6	87.1	116.1
31.5	83.6	85.8	88.3	90.2	94.4	94.0	95.0	94.1	92.9	90.9	89.1	116.0
40.0	82.1	84.1	86.9	88.9	92.7	92.4	93.3	92.2	91.0	89.2	83.3	113.2
50.0	79.8	82.0	84.6	86.3	90.7	90.0	90.0	89.9	88.5	86.7	83.2	110.6
63.0	77.0	79.0	81.0	83.8	87.4	86.6	87.8	86.8	85.5	84.9	84.0	107.6
80.0	73.7	75.7	78.9	80.1	84.2	83.0	84.5	84.0	82.7	83.2	84.2	104.9
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
											OAPNL =	130.0
OASPL	104.6	105.5	106.6	108.3	111.0	9	114.1	116.6	119.5	122.8	123.1	

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 705307 TEST DATE 11/29/76 SCALE RATIO 7.0/1 RUN NUMBER 20061 CONDITION 61.4

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		1.75	1.71		1.75	1.71
TEMP	(R)	1455.0	640.0	(K)	808.3	340.0
RHO	LB/FT3	0.032	0.072	KG/M3	0.508	1.149
VEL	FPS	1611.5	1052.6	M/S	491.2	320.8

		PRIMARY	FAN		PRIMARY	FAN
MASS FLOW	LB/S	126.9	141.6	KG/S	57.6	64.2
THRUST,IDL	LB			N		
THRUST,MEA	LB	0.0		N	0.0	
AREA (MOD)	SQFT			SQM		
W (MODEL)	LB/S	2.6	2.0	KG/S	1.2	1.3

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	63.5	64.1	66.0	67.5	68.6	69.6	71.2	74.3	76.8	79.6	79.4
63	65.8	67.6	69.4	70.5	72.2	73.1	74.4	77.4	80.7	83.9	83.6
80	69.0	69.5	70.3	71.7	72.7	73.5	75.4	78.3	83.2	85.7	82.5
100	71.4	71.2	72.5	73.8	74.6	75.5	77.6	80.8	84.5	86.8	82.4
125	70.2	72.1	72.2	74.5	75.7	75.7	77.1	81.1	85.2	87.4	83.8
160	71.2	71.0	72.8	74.3	76.6	77.6	79.1	82.6	85.6	86.7	83.6
200	70.9	72.5	73.8	75.2	77.3	77.5	79.5	82.2	84.3	85.0	81.5
250	70.6	72.3	73.5	74.7	77.1	77.4	79.2	81.6	82.7	83.4	80.0
315	69.3	71.0	72.4	73.9	76.6	77.1	79.1	81.0	81.0	79.7	76.5
400	68.5	70.7	71.9	74.0	76.6	77.4	79.4	80.7	80.0	77.5	73.3
500	68.6	70.1	71.9	73.9	76.4	77.3	79.1	79.9	78.5	75.6	70.9
630	68.0	69.9	71.0	73.6	76.6	77.1	79.1	79.4	77.4	73.7	68.1
800	67.8	69.2	71.0	73.2	76.1	76.7	78.2	78.2	75.8	71.8	64.8
1000	67.0	68.6	70.4	72.6	75.6	76.2	77.4	77.0	74.4	70.4	62.1
1250	65.0	67.9	69.7	71.8	75.1	75.4	76.5	75.9	73.0	68.8	59.3
1600	63.7	66.4	68.5	70.7	73.9	74.2	74.9	73.9	71.6	66.0	55.5
2000	62.6	65.6	67.7	70.5	73.5	73.3	73.3	71.8	68.5	63.0	51.1
2500	60.8	62.9	65.3	67.9	71.6	70.9	71.6	69.2	65.3	59.1	45.8
3150	56.6	60.4	62.7	65.1	68.7	68.2	67.7	65.6	61.5	54.3	38.9
4000	53.7	57.4	60.1	62.7	65.6	65.1	64.6	61.4	57.2	48.4	31.2
5000	51.1	55.8	58.4	60.6	64.5	63.2	62.5	59.0	53.7	45.0	26.3
6300	47.2	51.1	55.6	57.3	60.8	59.4	58.4	54.2	48.2	38.3	16.8
8000	42.6	46.4	50.2	52.3	56.3	54.4	53.0	48.5	41.3	29.8	7.4
10000	32.4	37.4	41.8	44.3	47.4	45.6	43.2	37.5	28.5	14.9	6.6
OASPL	80.9	82.4	83.8	85.6	87.9	88.5	90.0	91.8	93.5	94.7	91.5
PNL	87.2	89.5	93.7	94.0	96.8	96.9	97.6	97.7	97.4	96.4	91.6
	400. SIDELINE										
PNL	106.6	102.3	104.3	106.5	109.4	109.6	[illegible]	110.3	109.2	108.2	103.5
	2000. SIDELINE										
PNL	80.2	82.5	84.0	87.0	89.8	89.8	90.7	91.4	91.3	90.4	85.6
	4000. SIDELINE										
PNL	76.6	72.0	74.7	76.6	79.4	79.7	81.0	81.0	82.7	81.5	76.1
	6000. SIDELINE										
PNL	64.5	66.8	68.5	70.6	73.1	73.5	74.6	75.7	76.2	75.6	69.8

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 4A; Condition 6115

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 705307 TEST DATE 11/29/76 SCALE RATIO 7.0/1 RUN NUMBER 7006 CONDITION 6115

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		1.00	1.75		1.00	1.75	THRUST,IDL	LB			N		
TEMP	(R)	1437.0	665.0	(K)	798.3	369.4	THRUST,REA	LB	0.0		N	0.0	
RHO	LB/FT3	0.032	0.070	KG/M3	0.510	1.120	AREA (MOD)	SQFT			SQM		
VEL	FPS	1640.2	1089.4	M/S	499.9	332.0	W (MODEL)	LB/S	2.8	2.9	KG/S	1.3	1.3

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS RAW CORRECTED SPL - (MODEL)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PWL DB RE 1E-12W
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	78.4	82.1	84.1	84.3	84.4	85.0	86.5	89.3	91.0	95.3	99.8	[illegible]
.125	80.3	84.6	84.6	84.4	86.0	87.5	86.6	89.5	93.2	96.6	99.8	[illegible]
.160	84.1	86.5	84.9	85.3	84.5	85.0	86.5	88.8	92.9	98.9	102.3	[illegible]
.200	87.7	83.7	85.6	86.8	88.2	88.9	90.7	93.0	98.2	103.3	105.6	[illegible]
.250	83.9	85.2	86.4	88.6	89.2	90.6	92.6	95.7	100.3	105.5	107.4	[illegible]
.315	86.6	86.8	88.1	89.6	90.8	92.1	94.5	98.0	102.9	107.9	111.7	[illegible]
.400	89.3	90.3	91.6	92.6	94.2	95.7	97.6	102.0	106.8	111.6	115.0	[illegible]
.500	92.4	91.9	92.5	93.8	94.6	96.1	98.5	102.9	109.3	114.1	114.3	[illegible]
.630	94.6	93.9	94.7	95.8	96.8	98.2	101.1	105.0	110.9	115.3	114.6	[illegible]
.800	93.8	95.0	94.5	96.8	98.3	98.4	100.7	106.2	111.9	116.5	116.0	[illegible]
1.00	95.6	95.1	95.5	96.8	99.0	100.7	102.8	107.1	111.9	116.1	115.0	[illegible]
1.25	94.9	95.6	96.5	97.9	99.9	100.6	103.4	107.2	111.1	114.7	114.7	[illegible]
1.60	94.7	93.8	96.4	97.6	99.7	100.8	103.1	107.0	109.8	113.5	114.0	[illegible]
2.00	94.6	94.7	95.7	97.0	99.4	100.7	103.4	106.7	108.4	110.7	111.6	[illegible]
2.50	93.1	94.3	95.1	96.8	99.6	100.9	103.6	106.5	107.5	108.5	108.9	[illegible]
3.15	92.0	94.0	95.2	96.7	99.8	100.9	103.7	106.0	106.4	106.8	107.1	[illegible]
4.00	93.1	93.9	95.2	96.8	100.8	101.2	103.9	105.8	105.6	105.4	104.7	[illegible]
5.00	93.0	93.6	94.7	96.5	99.8	101.1	103.4	104.9	104.5	104.6	102.2	[illegible]
6.30	92.6	93.2	94.5	96.4	99.7	100.9	103.6	104.1	103.7	103.1	100.4	[illegible]
8.00	93.2	93.0	94.3	96.5	99.6	100.6	102.6	103.6	103.0	102.3	98.6	[illegible]
10.0	90.5	92.2	93.8	95.6	99.2	100.2	102.0	102.7	102.2	101.6	97.1	[illegible]
12.5	90.4	91.7	93.7	96.4	99.4	100.0	101.1	101.7	100.7	99.5	95.0	[illegible]
16.0	89.3	90.7	92.5	94.9	98.1	99.0	100.3	100.6	99.6	97.8	93.0	[illegible]
20.0	87.4	89.3	91.1	93.2	96.6	97.3	98.4	98.6	97.7	95.7	90.4	[illegible]
25.0	86.4	88.6	90.3	92.4	95.9	96.4	97.4	96.8	96.3	93.9	88.3	[illegible]
31.5	84.6	86.7	89.1	91.1	95.3	95.0	96.1	95.4	94.0	92.2	86.5	[illegible]
40.0	83.0	85.6	87.7	89.7	93.5	93.4	94.4	93.5	92.0	90.5	84.9	[illegible]
50.0	80.7	82.9	85.4	87.1	91.6	91.0	91.7	91.3	89.0	88.1	84.7	[illegible]
63.0	77.9	80.0	82.7	84.6	88.2	87.6	89.0	88.2	86.0	86.4	85.4	[illegible]
80.0	74.4	76.6	79.4	81.6	84.9	84.7	85.5	85.2	84.0	84.7	85.6	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	105.7	106.5	107.5	109.2	111.9	112.9	115.0	117.0	120.7	124.1	124.5	OAPWL = 139.3

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 705307 TEST DATE 11/29/76 SCALE RATIO 7.0/1 RUN NUMBER 7006 CONDITION 6115

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	139.2	142.6	KG/S	63.1	64.7
P.R.		1.00	1.75		1.00	1.75	THRUST,IDL	LB			N		
TEMP	(R)	1437.0	665.0	(K)	798.3	369.4	THRUST,REA	LB	0.0		N	0.0	
RHO	LB/FT3	0.032	0.070	KG/M3	0.510	1.120	AREA (MOD)	SQFT			SQM		
VEL	FPS	1640.2	1089.4	M/S	499.9	332.0	W (MODEL)	LB/S	2.8	2.9	KG/S	1.3	1.3

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	64.1	65.0	66.7	68.3	69.4	70.3	71.0	75.6	77.7	80.5	86.4
63	66.0	68.5	70.2	71.3	72.0	73.9	75.1	78.4	81.6	84.2	86.2
80	69.7	70.1	71.1	72.5	73.2	74.3	76.0	79.3	84.1	86.7	83.5
100	72.1	72.0	73.2	74.4	75.3	76.3	78.4	82.0	85.5	87.7	83.4
125	71.1	73.1	73.0	[illegible]	76.8	76.5	78.0	82.4	86.5	88.7	84.0
160	72.2	73.0	73.9	75.1	77.4	78.6	80.0	83.2	86.4	88.2	84.3
200	72.1	73.5	74.9	76.4	78.3	78.3	80.6	83.3	85.6	86.0	83.2
250	71.0	73.6	74.7	76.0	78.6	78.6	80.7	82.9	84.1	85.4	82.2
315	70.8	72.3	73.7	75.2	77.4	78.3	80.2	82.3	82.3	82.1	79.1
400	69.0	71.0	73.0	74.9	77.5	78.4	80.3	82.0	81.3	79.7	76.0
500	69.2	71.2	72.9	74.6	77.5	78.1	80.1	81.7	79.8	77.6	73.6
630	69.3	70.9	72.7	74.4	77.5	78.2	80.1	80.7	78.7	75.7	70.5
800	68.8	70.2	71.8	73.0	76.9	77.7	79.2	79.4	77.6	73.6	66.9
1000	67.9	69.4	71.2	73.2	76.4	77.1	78.3	78.0	75.5	71.0	63.0
1250	66.0	68.7	70.5	72.5	75.8	76.3	77.4	76.0	74.1	70.1	60.6
1600	64.4	67.1	69.3	71.3	74.7	75.1	75.9	75.0	72.1	67.2	56.0
2000	63.4	65.0	68.4	71.3	74.1	74.1	74.1	73.0	69.4	64.1	52.3
2500	61.1	63.7	66.2	68.8	71.8	72.0	72.1	70.5	66.6	60.2	47.0
3150	57.7	61.0	63.5	65.9	69.0	69.0	68.7	66.0	62.0	55.3	40.1
4000	54.7	58.4	61.0	63.4	66.6	66.2	65.7	62.7	58.4	49.7	32.4
5000	52.1	55.9	59.2	61.5	65.4	64.2	63.6	60.3	54.0	46.3	27.7
6300	48.1	52.0	55.8	58.1	61.6	60.4	59.5	55.5	49.2	39.6	18.4
8000	42.9	47.3	51.0	53.1	57.2	55.4	53.9	49.9	42.6	31.7	8.9
10000	33.3	38.4	42.7	45.1	48.2	46.6	44.4	38.9	29.8	16.4	0.0
OASPL	82.0	83.4	84.8	86.5	88.8	89.4	91.0	93.0	94.7	96.1	92.0
PNL	88.2	90.4	92.5	94.6	97.6	97.8	98.5	98.9	98.6	98.1	93.4
460. SIDELINE											
PNL	101.6	103.7	105.2	107.3	110.3	110.6	111.5	111.5	110.4	109.8	105.3
2000. SIDELINE											
PNL	81.4	83.5	85.5	87.8	90.6	90.7	91.7	92.6	92.5	92.1	87.3
4000. SIDELINE											
PNL	72.8	74.0	75.7	77.7	80.3	80.7	82.6	83.1	83.6	83.3	77.9
6000. SIDELINE											
PNL	65.7	68.0	69.6	71.5	74.6	74.5	75.7	77.0	77.7	77.5	71.6

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 4A; Condition 6116

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 705307 TEST DATE 11/29/76 SCALE RATIO 7.0/1 RUN NUMBER 20661 CONDITION 6116

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		1.86	1.79		1.86	1.79	THRUST,IDL	LB			N		
TEMP	(R)	1467.0	669.0	(K)	815.0	371.7	THRUST,MEA	LB	0.0		N	0.0	
RHO	LB/FT3	0.032	0.070	KG/M3	0.511	1.127	AREA (MOD)	SQFT			SQM		
VEL	FPS	1700.2	1110.6	M/S	518.2	338.5	W (MODEL)	LB/S	2.8	2.9	KG/S	1.3	1.3

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (NCCEL)

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PNLDB 60-170
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	79.0	82.6	84.6	84.9	85.1	85.7	87.2	89.9	91.6	96.3	100.6	[illegible]
.125	81.2	85.4	84.7	85.3	87.5	88.4	86.9	90.7	94.3	98.1	101.2	[illegible]
.160	84.9	87.4	85.7	85.9	85.2	85.8	87.2	89.6	94.6	99.7	103.0	[illegible]
.200	83.0	84.7	86.5	87.5	88.8	89.6	91.6	93.9	99.2	104.4	106.7	[illegible]
.250	84.0	86.1	87.3	89.1	89.6	90.9	92.7	96.3	101.2	106.3	108.6	[illegible]
.315	87.3	87.5	89.1	90.2	91.4	92.0	95.1	99.5	103.7	108.0	112.0	[illegible]
.400	90.1	91.1	92.4	93.3	95.1	96.4	98.7	103.0	107.9	112.7	115.7	[illegible]
.500	91.0	92.7	93.3	94.4	95.4	97.0	99.3	103.9	110.3	115.0	115.2	[illegible]
.630	95.7	94.7	95.6	97.0	97.6	99.0	102.0	107.0	112.0	116.0	115.5	[illegible]
.800	94.4	95.5	95.3	97.5	98.9	99.2	101.6	107.3	112.9	117.3	116.8	[illegible]
1.00	95.0	96.0	96.4	97.9	100.1	101.8	103.8	108.3	113.3	117.4	117.0	[illegible]
1.25	95.9	96.8	97.7	98.0	101.0	101.8	104.4	108.4	112.0	116.4	116.1	[illegible]
1.60	96.3	97.2	97.8	98.7	101.0	102.0	104.4	108.3	111.3	115.6	115.8	[illegible]
2.00	95.6	96.6	97.0	98.0	100.6	101.8	104.5	108.1	109.8	113.0	113.7	[illegible]
2.50	94.4	95.4	96.3	98.1	100.7	102.0	104.7	107.8	108.9	110.9	111.3	[illegible]
3.15	94.1	95.1	96.3	97.8	100.6	102.0	104.7	107.2	107.7	109.2	109.6	[illegible]
4.00	94.0	95.1	96.1	97.9	100.9	102.3	105.0	107.1	107.0	107.7	107.0	[illegible]
5.00	93.9	94.5	95.7	97.5	100.7	102.2	104.5	106.2	105.9	106.2	104.4	[illegible]
6.30	93.5	94.2	95.6	97.5	100.7	102.1	104.3	105.4	105.1	105.1	102.5	[illegible]
8.00	92.2	93.9	95.2	97.1	100.6	101.7	103.8	104.9	104.4	104.0	100.7	[illegible]
10.0	91.5	93.1	94.8	96.8	100.3	101.2	103.2	104.1	103.6	102.7	99.6	[illegible]
12.5	91.2	92.6	94.7	97.2	100.5	101.0	102.5	103.6	102.1	101.1	96.7	[illegible]
16.0	90.2	91.5	93.5	96.0	99.4	100.0	101.5	102.0	101.2	99.5	94.9	[illegible]
20.0	88.4	90.3	92.1	94.5	97.8	98.5	99.7	99.9	99.4	97.5	92.2	[illegible]
25.0	87.4	89.6	91.4	93.0	97.1	97.4	98.7	98.4	97.0	95.7	90.3	[illegible]
31.5	85.7	87.6	90.3	92.4	96.4	96.4	97.3	96.9	95.7	94.0	88.2	[illegible]
40.0	84.2	86.1	88.8	90.9	94.8	94.7	95.7	95.1	93.9	92.2	86.2	[illegible]
50.0	81.8	84.0	86.6	88.4	92.8	92.3	93.1	92.7	91.6	89.9	85.5	[illegible]
63.0	79.0	81.2	83.9	85.8	89.5	88.9	90.4	89.8	88.8	88.5	86.1	[illegible]
80.0	75.5	77.7	80.6	82.1	86.1	86.1	86.8	86.0	86.0	86.7	86.1	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	106.7	107.5	108.6	110.2	112.9	113.9	116.2	119.0	122.0	125.6	125.7	

OAPWL = 146.6

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 705307 TEST DATE 11/29/76 SCALE RATIO 7.0/1 RUN NUMBER 20661 CONDITION 6116

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	138.7	144.5	KG/S	62.9	65.6
P.R.		1.86	1.79		1.86	1.79	THRUST,IDL	LB			N		
TEMP	(R)	1467.0	669.0	(K)	815.0	371.7	THRUST,MEA	LB	0.0		N	0.0	
RHO	LB/FT3	0.032	0.070	KG/M3	0.511	1.127	AREA (MOD)	SQFT			SQM		
VEL	FPS	1700.2	1110.6	M/S	518.2	338.5	W (MODEL)	LB/S	2.8	2.9	KG/S	1.3	1.3

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	64.0	65.7	67.7	68.9	70.0	71.0	72.6	75.9	78.5	81.4	81.2
63	67.6	69.4	71.6	72.0	73.7	74.6	76.2	79.4	82.7	85.3	84.0
80	70.5	70.9	71.9	73.1	74.0	75.2	76.8	80.3	85.1	87.6	84.4
100	73.0	72.8	74.1	75.6	76.1	77.1	79.3	83.2	86.6	89.0	86.3
125	73.3	73.6	73.9	75.4	76.4	77.3	78.9	83.5	85.9	89.7	85.9
160	73.0	73.9	74.8	76.4	78.5	79.7	81.0	84.6	87.8	89.5	85.5
200	73.1	74.7	76.1	77.3	79.6	79.7	81.6	84.3	87.3	88.5	84.6
250	72.4	75.0	76.1	77.1	79.3	79.8	81.5	84.3	85.9	87.5	84.0
315	72.6	73.6	75.3	76.1	79.3	79.5	81.5	83.3	83.7	86.4	81.2
400	71.1	72.9	74.2	76.2	78.6	79.6	81.3	83.5	82.7	82.1	78.1
500	70.5	72.5	74.0	75.7	78.3	79.2	81.1	82.6	81.2	80.0	76.1
630	70.2	72.1	73.6	75.5	78.2	79.3	81.2	82.0	80.1	76.0	72.6
800	69.7	71.3	72.4	74.8	77.0	78.0	80.3	80.7	78.4	73.6	69.1
1000	68.9	70.4	72.4	74.3	77.4	78.3	79.6	79.3	76.9	73.0	65.6
1250	67.0	69.6	71.4	73.5	76.0	77.6	78.6	78.2	75.5	71.6	62.7
1600	65.4	68.0	70.3	72.5	75.0	76.1	77.1	76.6	73.5	68.9	58.7
2000	64.2	66.7	69.5	72.1	75.2	75.1	75.5	74.5	70.0	65.7	54.0
2500	62.6	64.3	67.2	69.9	73.1	73.0	73.3	71.9	66.2	61.1	48.0
3150	58.7	62.0	64.5	67.2	70.2	70.2	70.0	68.1	60.2	55.1	40.0
4000	55.7	59.6	62.1	64.6	67.6	67.2	67.0	64.3	59.9	51.5	34.6
5000	53.2	56.8	58.6	62.5	64.5	65.6	64.8	61.0	56.5	48.1	29.4
6300	49.5	53.1	56.0	59.0	61.5	62.3	61.3	57.1	51.3	41.3	19.2
8000	44.6	48.4	52.2	54.2	57.2	56.7	55.3	53.1	44.6	33.0	9.7
10000	34.4	39.6	43.9	46.3	49.5	47.3	45.8	40.5	31.8	18.5	0.0
OASPL	82.6	84.4	85.8	87.5	89.8	90.5	92.1	94.7	96.0	97.5	94.0
PNL	89.2	91.4	93.6	95.8	98.7	98.9	99.8	100.2	100.1	99.6	95.1

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
400. SIDELINE PNL	102.0	104.1	106.2	108.4	111.4	111.7	112.7	112.8	111.9	111.6	107.6
2000. SIDELINE PNL	82.6	84.6	86.6	88.8	91.6	91.8	92.6	93.9	94.6	93.8	88.9
4000. SIDELINE PNL	73.1	75.2	76.9	78.8	81.3	81.6	83.3	84.4	85.7	85.1	79.5
6000. SIDELINE PNL	67.1	69.2	70.8	72.7	75.1	75.6	76.9	78.4	79.3	79.3	73.2

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 4A; Condition 6117

a.) Model Data Measured At 15 Ft. Radius

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 4A; Condition 6118

a.) Model Data Measured At 15 Ft. Radius

```
STAND [illegible]   RIG ID [illegible]   TEST DATE 11/29/76   SCALE RATIO 7.0/1   RUN NUMBER [illegible]   CONDITION 6118
[illegible]
```

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	[illegible]
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.100	84.0	85.7	87.0	87.0	87.9	88.5	89.9	92.3	94.0	96.6	103.1	[illegible]
.125	83.6	88.0	87.1	88.6	90.2	91.1	89.6	92.6	96.7	100.3	103.4	[illegible]
.160	87.6	90.1	88.3	89.6	88.1	88.2	89.9	92.6	97.6	[illegible]	[illegible]	[illegible]
.200	86.5	87.1	89.0	90.0	91.5	92.1	94.2	96.7	102.0	107.1	[illegible]	[illegible]
.250	87.6	88.6	89.0	91.0	92.6	93.5	95.6	99.1	104.1	109.0	[illegible]	[illegible]
.315	89.0	89.0	92.4	92.9	94.2	95.6	98.1	102.1	106.7	111.6	114.1	[illegible]
.400	92.0	93.5	94.3	95.6	97.6	96.9	101.2	105.7	111.0	115.3	116.5	[illegible]
.500	95.0	95.3	95.0	96.0	97.9	99.5	102.2	106.0	113.6	118.2	118.0	[illegible]
.630	98.0	96.9	98.6	99.0	100.3	101.0	104.9	110.6	115.7	119.7	118.1	[illegible]
.800	97.3	98.3	97.8	100.3	101.7	102.3	106.7	110.0	117.1	120.6	119.7	[illegible]
1.00	98.0	98.9	99.2	100.7	102.9	104.0	107.2	112.3	116.0	121.2	119.6	[illegible]
1.25	98.9	99.6	100.6	101.0	104.0	105.0	106.0	112.5	118.6	121.6	119.5	[illegible]
1.60	99.5	100.0	101.1	101.0	104.6	105.6	106.6	112.3	117.3	121.3	119.9	[illegible]
2.00	99.0	99.0	100.3	101.7	104.1	105.2	[illegible]	112.0	116.1	120.0	118.7	[illegible]
2.50	98.6	99.2	99.7	101.3	104.3	105.3	106.5	111.0	116.7	118.5	117.1	[illegible]
3.15	98.0	98.7	99.7	101.2	104.1	105.6	106.0	111.7	[illegible]	117.1	115.2	[illegible]
4.00	97.6	98.3	99.5	101.8	104.2	105.7	108.5	111.0	112.6	115.9	112.6	[illegible]
5.00	97.3	97.0	98.7	100.0	104.6	105.6	104.2	110.8	111.5	113.4	110.3	[illegible]
6.30	96.9	97.4	98.6	100.0	106.1	105.5	106.1	109.5	110.5	111.6	108.3	[illegible]
8.00	95.6	97.2	98.3	100.3	103.9	105.3	107.7	108.9	109.0	109.0	106.5	[illegible]
10.0	94.7	96.1	97.9	100.6	103.7	105.6	107.1	108.2	108.5	108.2	104.7	[illegible]
12.5	94.0	95.0	97.0	99.9	103.9	104.7	106.4	107.2	106.9	106.0	102.6	[illegible]
16.0	93.1	94.0	96.0	99.2	102.9	103.8	105.5	106.6	105.9	105.3	100.9	[illegible]
20.0	91.2	93.5	95.3	97.7	101.6	102.3	103.6	104.5	104.2	103.3	98.5	[illegible]
25.0	90.3	92.9	94.7	97.1	100.0	101.3	[illegible]	103.6	103.0	101.7	96.7	[illegible]
31.5	88.6	90.9	93.6	95.0	100.3	100.1	101.6	101.6	101.1	100.2	95.6	[illegible]
40.0	87.8	89.6	92.2	94.5	98.8	95.7	100.6	100.6	99.4	98.8	92.8	[illegible]
50.0	84.9	87.6	90.0	92.1	96.0	96.6	97.7	98.6	97.6	96.3	91.7	[illegible]
63.0	82.1	84.9	87.1	89.3	93.6	93.2	95.1	95.6	94.5	94.5	91.2	[illegible]
80.0	78.7	81.0	84.6	85.7	90.6	90.3	91.7	92.2	92.0	92.4	90.0	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
OASPL	109.4	110.7	111.6	113.3	116.2	117.3	119.4	122.4	126.4	[illegible]	129.7	

[illegible] = [illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

```
STAND X206   RIG ID 705307   TEST DATE 11/29/76   SCALE RATIO 7.0/1   RUN NUMBER [illegible]   CONDITION 6118
                  PRIMARY   FAN                PRIMARY   FAN                            PRIMARY   FAN          PRIMARY   FAN
AREA   SQFT                           SQM                      MASS FLOW   LB/S    154.0    151.9   KG/S   70.2     68.9
P.R.            2.09      1.96                2.00      1.96   THRUST,IDL  LB
TEMP     (R)  1562.0     697.0      (K)     867.8     387.2   THRUST,MEA  LB               0.0     N                0.0
RHO  LB/FT3    0.031     0.060   KG/M3     0.493     1.110   AREA (MOD)  SQFT                    SQM
VEL     FPS   1896.2    1212.6     M/S     578.0     369.6   W (MODEL)   LB/S     3.[illegible]      3.1   KG/S    1.4      1.4
```

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	67.3	68.0	70.1	71.6	72.8	73.6	75.6	78.5	81.5	84.2	84.0
63	70.3	71.7	72.9	74.3	74.2	77.1	78.7	82.1	85.0	87.9	87.7
80	73.3	73.5	74.2	75.5	76.5	77.3	79.7	83.2	88.4	90.0	87.2
100	75.3	75.0	76.5	78.6	78.8	79.9	82.2	86.3	90.3	92.1	88.9
125	74.6	76.4	76.3	78.9	80.2	80.2	82.6	87.0	91.7	93.0	88.1
160	75.8	76.8	77.6	79.2	81.3	82.5	84.4	88.4	92.5	93.3	88.3
200	76.3	77.7	79.0	80.3	82.8	82.9	85.2	88.6	92.9	93.2	88.0
250	76.6	78.6	79.4	80.2	82.7	83.2	85.1	88.2	91.6	94.2	88.1
315	76.4	77.4	78.3	79.9	82.1	82.8	85.0	87.6	90.0	91.4	86.2
400	75.3	76.7	77.6	79.4	82.2	82.8	85.2	87.3	88.5	89.7	86.2
500	74.4	75.9	77.4	79.1	81.8	82.6	85.4	86.4	86.9	87.9	83.7
630	73.6	75.3	77.6	78.7	81.7	82.7	83.1	85.9	85.7	85.7	78.6
800	73.1	74.4	75.8	78.1	81.1	82.2	84.0	84.6	84.0	83.0	75.8
1000	72.2	73.6	75.3	77.4	80.0	81.7	83.4	83.4	82.3	80.3	71.7
1250	70.2	72.9	74.5	76.7	80.3	81.0	82.5	82.2	80.7	77.6	68.5
1600	68.6	71.2	73.4	75.7	79.2	79.9	81.6	80.5	78.4	74.4	64.4
2000	67.6	69.7	72.3	74.0	78.6	78.0	79.4	78.5	75.6	71.2	59.9
2500	64.9	67.8	70.3	73.1	76.6	76.6	77.3	76.3	72.9	67.7	54.9
3150	61.5	65.2	67.7	70.4	73.8	74.0	74.1	72.7	69.1	62.9	48.2
4000	58.6	62.7	65.4	68.1	71.5	71.1	71.1	68.9	65.1	57.5	40.8
5000	56.1	60.1	63.7	66.2	70.4	69.3	69.1	66.5	61.9	54.3	36.2
6300	52.2	56.4	60.3	62.9	66.7	65.7	65.1	62.0	56.6	47.9	26.3
8000	47.1	51.0	55.6	58.1	62.2	64.0	59.9	56.6	56.2	39.6	15.9
10000	37.5	42.0	47.1	49.0	53.4	51.6	50.5	45.7	37.5	24.3	6.6
ASPL	86.2	87.6	88.0	90.5	93.1	93.6	95.7	98.6	100.9	102.0	97.3
PNL	92.5	94.7	96.7	99.0	102.1	102.5	103.6	104.3	105.4	105.4	99.3

400. SIDELINE

PNL	105.1	107.4	109.3	111.6	114.9	115.3	116.5	117.6	117.2	117.2	111.6

2000. SIDELINE

PNL	84.1	88.1	89.7	91.9	95.1	95.4	96.6	97.9	99.3	99.3	93.1

4000. SIDELINE

PNL	76.6	78.7	80.1	82.1	84.8	85.3	87.6	88.5	90.5	90.6	83.6

6000. SIDELINE

PNL	70.5	72.7	74.1	75.9	76.6	79.6	80.7	82.5	84.9	84.5	77.1

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 4A; Condition 6119

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 305307 TEST DATE 1/29/76 SCALE RATIO 7.0/1 RUN NUMBER [illegible] CONDITION 6119

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		2.12	1.90		2.12	1.90	THRUST,IDL	LB			N		
TEMP	DEG R	1660.6	695.6	DEG K	922.6	386.1	THRUST,MEA	LB		0.0	N		0.0
RHO	LB/FT3	0.030	0.070	KG/M3	0.481	1.116	AREA (NOZ)	SQFT			SQM		
VEL		FPS 1943.9	1218.7	M/S	592.5	371.5	W (MODEL)	LB/S	3.7	1.1	KG/S	1.5	1.4

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (MODEL)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PWL DB-1/3
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	82.4	86.6	87.4	88.0	88.3	88.9	90.2	93.1	94.0	99.2	104.1	115.0
.125	84.2	88.4	87.4	88.4	90.4	91.3	89.9	93.3	97.1	100.7	104.6	116.6
.160	86.2	90.7	88.8	89.1	88.2	88.8	90.4	97.2	97.7	102.2	106.5	118.6
.200	86.4	87.5	89.2	90.4	92.1	92.5	94.5	96.9	102.7	107.5	110.2	122.6
.250	88.2	89.4	90.2	92.6	93.6	94.0	95.8	99.6	104.5	109.5	112.1	123.4
.315	90.4	90.2	91.0	93.2	94.8	96.6	98.2	102.5	107.2	112.0	115.4	126.6
.400	93.1	93.9	94.9	96.6	97.0	99.5	101.5	106.1	111.4	115.0	118.9	130.4
.500	96.0	95.6	95.9	97.1	98.2	100.0	102.6	107.1	114.2	118.6	119.2	132.1
.630	98.2	97.4	98.4	99.7	100.7	102.2	104.2	110.7	114.2	120.2	118.2	133.0
.800	97.4	98.6	98.3	100.6	102.0	102.7	105.2	111.6	117.7	121.1	119.6	134.9
1.00	99.0	99.3	99.4	101.1	103.4	103.3	107.0	113.8	118.8	121.6	120.2	135.7
1.25	99.3	100.2	101.2	102.3	104.7	105.0	108.5	113.3	119.2	121.5	119.8	135.9
1.60	99.7	100.9	101.4	102.2	104.8	106.0	108.6	113.0	118.5	122.6	120.1	135.9
2.00	100.0	100.1	100.8	102.1	104.6	105.0	108.0	112.7	117.1	121.0	119.2	135.4
2.50	99.1	99.7	100.2	101.0	104.7	106.2	109.2	112.5	115.8	119.5	117.6	133.9
3.15	98.6	99.2	100.0	101.6	104.5	106.2	109.2	111.9	114.5	118.1	115.6	132.8
4.00	98.0	98.0	99.7	101.5	104.7	106.4	109.5	111.6	113.0	116.4	113.4	131.9
5.00	97.8	98.3	99.3	101.3	104.5	106.2	108.8	110.8	112.6	114.1	110.7	130.6
6.30	97.6	98.0	99.1	101.1	104.6	106.2	108.7	110.1	111.5	112.4	108.7	129.8
8.00	96.0	97.7	98.9	100.8	104.2	105.9	108.3	109.6	110.4	110.7	106.8	128.9
10.0	95.1	96.7	98.5	100.6	104.2	105.6	107.6	108.9	109.2	109.1	105.3	128.1
12.5	94.5	96.0	97.9	100.3	104.3	105.3	106.9	107.8	107.6	107.5	103.3	127.2
16.0	93.6	95.1	97.0	99.6	103.4	104.5	106.0	107.1	106.6	104.1	101.4	126.3
20.0	91.8	93.9	95.7	98.3	101.9	103.1	104.3	105.2	104.8	104.2	99.2	124.6
25.0	90.8	93.3	95.1	97.6	101.1	102.0	103.4	103.5	103.6	102.5	97.5	123.4
31.5	89.0	91.4	94.0	96.3	100.6	100.9	102.0	102.2	101.7	101.2	95.7	122.1
40.0	87.5	89.8	92.6	94.9	99.0	99.4	100.4	100.6	100.0	99.7	93.8	120.6
50.0	85.3	87.7	90.3	92.4	97.0	97.0	98.2	98.7	97.9	97.6	92.4	118.4
63.0	82.6	84.8	87.6	90.0	93.9	93.9	95.5	95.8	95.3	95.8	91.7	115.7
80.0	79.1	81.4	84.4	86.2	90.7	91.2	92.3	93.2	92.7	93.4	90.9	112.4
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	110.3	111.1	112.0	113.7	116.6	118.0	120.4	123.6	127.7	130.9	129.6	

OAPWL = 149.5

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 305307 TEST DATE 1/29/76 SCALE RATIO 7.0/1 RUN NUMBER [illegible] CONDITION 6119

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	156.8	[illegible]	KG/S	71.1	[illegible]
P.R.		2.12	1.90		2.12	1.90	THRUST,IDL	LB			N		
TEMP	DEG R	1660.6	695.6	DEG K	922.2	386.1	THRUST,MEA	LB	0.0		N		0.0
RHO	LB/FT3	0.030	0.070	KG/M3	0.481	1.116	AREA (NOZ)	SQFT			SQM		
VEL	FPS	1943.9	1218.7	M/S	592.5	371.5	W (MODEL)	LB/S	3.7	1.1	KG/S	1.5	1.4

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	67.9	68.4	70.4	71.9	73.4	74.2	75.8	78.9	82.0	[illegible]	84.6
63	70.8	72.1	73.5	74.7	76.4	77.7	79.6	82.5	86.7	[illegible]	86.1
80	73.5	73.0	74.5	75.8	76.6	78.2	80.1	83.7	85.6	91.2	87.4
100	75.0	75.5	76.9	78.3	79.2	80.3	82.5	86.9	90.6	[illegible]	87.0
125	76.7	76.7	76.8	79.2	80.5	80.8	82.5	87.8	92.3	93.5	88.4
160	76.2	77.2	77.8	79.6	81.8	83.2	85.6	89.2	93.3	93.7	88.2
200	76.5	78.1	79.6	80.8	83.1	83.7	85.7	89.4	95.7	93.6	88.3
250	76.8	78.7	79.7	80.6	83.1	83.8	85.7	88.9	97.8	93.9	88.5
315	76.8	77.7	78.8	80.3	84.0	83.4	85.6	88.3	91.0	92.4	86.7
400	75.8	77.2	78.1	79.9	82.6	83.7	85.9	88.0	89.6	90.7	84.7
500	75.0	76.4	77.7	79.5	[illegible]	81.4	83.6	87.1	87.4	86.9	82.1
630	74.2	75.8	77.2	79.3	82.2	83.6	85.7	86.5	86.7	86.7	79.2
800	73.6	74.9	76.6	78.6	81.6	82.8	84.6	83.9	85.1	83.7	75.4
1000	72.9	74.2	75.8	77.9	81.3	82.4	84.0	84.6	82.3	81.1	72.1
1250	70.8	73.4	75.1	77.2	80.4	81.6	83.1	82.9	81.5	78.5	68.0
1600	69.0	71.6	74.0	76.5	79.7	80.5	81.5	81.2	79.1	75.3	65.0
2000	67.5	70.1	72.6	75.2	79.6	79.4	79.9	79.1	76.3	72.1	60.6
2500	65.4	68.1	70.7	73.5	77.1	77.9	77.8	77.0	73.8	68.5	55.4
3150	62.1	65.6	68.1	71.0	74.3	74.8	74.6	73.4	69.7	63.8	[illegible]
4000	59.1	63.1	65.8	68.6	72.0	71.6	71.7	69.5	65.7	58.3	41.6
5000	56.5	60.6	64.1	66.7	70.7	70.1	69.5	67.1	62.5	55.3	36.9
6300	52.6	56.8	60.7	63.3	67.1	66.4	65.5	62.6	57.2	48.8	27.3
8000	47.5	52.1	55.9	58.6	62.6	61.4	60.4	57.3	50.7	40.7	16.6
10000	38.6	43.2	47.6	50.3	55.4	57.3	50.9	46.9	38.3	25.8	0.0
OASPL	86.6	88.6	89.2	91.6	93.5	96.4	96.3	98.3	101.[illegible]	107.6	97.7
PNL	92.9	95.6	97.1	99.4	102.6	103.7	104.1	105.0	106.5	106.1	99.8

400. SIDELINE PNL	105.8	107.1	109.0	112.1	115.3	116.6	117.1	117.7	118.6	117.9	111.0
2000. SIDELINE PNL	86.8	88.5	90.1	92.4	95.5	96.1	97.2	96.6	100.2	100.0	93.5
4000. SIDELINE PNL	77.1	79.6	80.6	82.5	85.3	86.0	87.0	86.2	91.4	91.1	84.1
6000. SIDELINE PNL	71.6	73.8	74.8	76.4	79.1	79.8	81.3	83.3	85.0	85.3	77.5

THIS PAGE IS BEST QUALITY PRACTICABLE FROM COPY FURNISHED TO DDC

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 4A; Condition 6120

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG 10 795307 TEST DATE 11/29/76 SCALE RATIO 7.0/1 RUN NUMBER 76061 CONDITION 6120

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT	2.96	1.90	SQM	0.275	0.182
P.R.		2.15	2.00		2.15	2.00
TEMP	(R)	1660.0	690.0	(K)	892.2	387.0
RHO	LB/FT3	0.030	0.070	KG/M3	0.483	1.114
VEL	FPS	1957.2	1229.5	M/S	596.6	374.8

MASS FLOW LB/S; THRUST,IDL LB; THRUST,MEA LB; AREA (MOD) SQFT; W (MODEL) LB/S

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS

FAA CORRECTED ARC - SMOOTHED

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PNLM
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.100	82.6	88.1	84.9	87.1	88.5	89.2	90.3	92.9	94.8	99.4	103.7	[illegible]
.125	84.1	86.1	87.4	88.6	90.6	91.5	94.8	93.3	97.2	100.8	104.0	[illegible]
.160	88.0	90.8	89.0	89.3	88.5	89.6	90.8	92.9	98.0	101.1	106.1	[illegible]
.200	87.1	87.4	89.4	90.7	92.1	92.7	94.6	96.8	100.5	107.6	110.1	[illegible]
.250	88.3	89.1	90.4	92.3	93.2	94.3	95.7	99.4	104.4	109.7	112.1	[illegible]
.315	90.8	90.5	92.1	91.3	94.9	96.2	98.6	102.8	107.2	112.9	115.0	[illegible]
.400	93.6	94.0	94.9	96.2	98.6	99.7	101.0	106.3	111.5	118.0	119.2	[illegible]
.500	96.1	95.0	96.6	97.2	98.1	100.3	102.9	107.3	114.0	118.0	118.5	[illegible]
.630	96.6	97.6	98.0	100.1	100.9	102.5	105.5	110.0	116.9	120.4	118.7	[illegible]
.800	97.0	98.0	98.4	100.9	102.4	103.1	105.5	111.3	118.0	121.4	119.9	[illegible]
1.00	99.3	99.6	99.7	101.4	103.5	105.4	106.0	113.2	119.0	121.9	120.4	[illegible]
1.25	99.0	100.4	101.3	102.5	104.9	106.0	108.8	113.5	119.5	121.7	119.8	[illegible]
1.60	100.0	101.3	101.6	102.5	105.0	106.2	109.0	113.2	118.9	122.3	120.5	[illegible]
2.00	100.4	100.7	101.0	102.4	104.9	106.1	109.0	112.9	117.5	121.3	119.4	[illegible]
2.50	99.4	99.0	100.5	102.2	104.9	106.4	109.5	112.0	116.3	120.4	117.8	[illegible]
3.15	98.8	99.3	100.3	101.8	104.8	106.3	109.5	112.1	114.9	119.5	116.0	[illegible]
4.00	98.6	99.1	100.1	101.7	105.1	106.6	109.7	111.9	114.2	116.8	113.7	[illegible]
5.00	98.2	98.7	99.5	101.5	104.9	106.5	109.2	110.9	113.6	114.6	111.1	[illegible]
6.30	98.3	98.6	99.5	101.3	104.9	106.5	109.0	110.3	112.1	112.6	109.2	[illegible]
8.00	98.4	98.2	99.4	101.2	104.7	106.3	108.0	109.9	110.9	111.2	107.4	[illegible]
10.0	95.5	97.3	98.0	101.1	104.6	105.9	108.0	109.0	109.6	109.6	105.0	[illegible]
12.5	95.6	96.4	98.5	100.5	104.6	105.6	107.3	106.1	108.6	106.1	103.8	[illegible]
16.0	93.8	95.5	97.5	100.0	103.6	104.9	104.5	107.2	106.9	106.8	102.1	[illegible]
20.0	92.1	94.3	96.2	98.5	102.4	103.8	104.8	105.3	105.3	104.9	99.7	[illegible]
25.0	91.0	93.5	95.3	97.7	101.5	102.3	103.6	103.8	103.9	103.2	98.0	[illegible]
31.5	89.4	91.0	94.4	96.0	101.1	101.1	102.4	102.0	102.1	101.9	96.4	[illegible]
40.0	87.8	90.3	93.0	95.3	99.5	99.8	100.9	101.0	100.6	100.6	94.4	[illegible]
50.0	85.6	88.6	90.8	92.7	97.6	97.5	96.6	96.9	98.6	98.5	93.0	[illegible]
63.0	82.9	85.2	88.0	90.5	94.4	94.5	96.1	96.2	96.0	96.7	92.2	[illegible]
80.0	79.5	81.9	84.9	86.8	91.2	91.0	92.9	93.6	93.7	94.7	91.4	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LSPL	110.7	111.4	112.3	114.0	117.6	118.3	120.7	123.7	128.1	131.7	129.0	

OAPWL = 165.7

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG 10 795307 TEST DATE 11/29/76 SCALE RATIO 7.0/1 RUN NUMBER 76061 CONDITION 6120

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT	2.96	1.96	SQM	0.275	0.182
P.R.		2.15	2.00		2.15	2.00
TEMP	(R)	1660.0	690.0	(K)	892.2	387.0
RHO	LB/FT3	0.030	0.070	KG/M3	0.483	1.114
VEL	FPS	1957.2	1229.5	M/S	596.6	374.8

		PRIMARY	FAN		PRIMARY	FAN
MASS FLOW	LB/S	155.8	151.9	KG/S	72.0	68.9
THRUST,IDL	LB	9669.9	8000.1	N	42926.0	35600.2
THRUST,MEA	LB	0.0		N		0.0
AREA (MOD)	SQFT	0.06	0.04	SQM	0.006	0.004
W (MODEL)	LB/S	3.2	3.1	KG/S	1.5	1.4

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	68.1	68.7	70.7	72.0	73.5	74.6	76.1	79.2	82.6	85.0	84.0
63	70.9	72.2	73.5	74.9	76.6	77.9	79.3	82.7	86.3	88.6	88.4
80	73.6	73.8	74.6	75.9	76.9	78.5	80.4	83.7	88.8	91.4	87.7
100	75.9	75.7	77.1	78.7	79.4	80.6	82.8	87.0	91.0	92.8	87.5
125	75.1	76.9	76.9	79.5	80.9	81.2	82.8	87.9	92.6	93.8	88.7
160	76.5	77.5	78.1	79.9	81.9	83.3	85.2	89.3	93.5	94.6	88.9
200	76.8	78.3	79.7	81.0	83.3	83.9	86.0	89.6	94.6	93.8	88.3
250	77.1	79.1	79.9	80.9	83.3	84.0	86.1	89.1	93.7	94.2	88.7
315	77.2	77.8	79.0	80.6	82.9	83.7	85.8	88.5	91.4	92.7	86.9
400	76.1	77.3	78.4	80.3	82.8	83.9	86.2	88.1	90.1	91.3	84.9
500	75.2	76.5	78.0	79.7	82.5	83.5	85.4	87.3	88.3	89.3	82.5
630	74.8	76.1	77.6	79.3	82.6	83.6	85.9	86.0	87.3	87.1	79.5
800	74.1	75.3	76.6	78.8	82.0	[illegible]	85.0	85.6	[illegible]	84.2	[illegible]
1000	73.6	74.8	76.2	78.1	81.6	82.7	84.3	84.2	83.9	[illegible]	[illegible]
1250	71.2	73.9	75.6	77.6	80.9	82.0	83.4	83.2	82.6	[illegible]	69.4
1600	69.4	72.2	74.3	76.8	80.1	80.8	83.9	81.3	79.5	75.8	65.5
2000	68.0	74.5	73.2	75.4	79.5	79.9	80.3	79.4	76.7	77.7	61.1
2500	65.6	68.5	71.2	73.9	77.5	77.9	78.3	77.1	73.4	69.6	56.1
3150	62.4	66.0	68.6	71.2	74.8	75.3	75.1	73.3	70.2	64.5	49.4
4000	59.3	63.3	66.0	68.7	72.2	72.1	71.9	69.7	66.6	59.0	42.1
5000	56.9	60.8	64.5	67.0	71.2	70.3	69.9	67.5	62.9	54.6	37.6
6300	52.9	57.3	61.1	63.7	67.6	66.8	66.0	63.0	57.8	49.7	27.9
8000	47.8	52.4	56.4	58.7	63.2	61.4	60.8	57.5	51.4	41.6	17.2
10000	38.3	43.6	48.0	51.6	54.4	52.9	51.5	46.9	34.6	26.7	0.0
OASPL	87.0	88.3	89.5	91.2	93.8	94.7	96.6	98.9	102.0	102.9	97.9
PNL	93.3	95.4	97.5	99.7	102.9	103.5	104.5	105.1	106.6	106.5	100.0
400. SIDELINE											
PNL	105.9	108.1	110.2	112.4	115.7	116.3	117.5	117.9	118.6	118.3	112.1
2000. SIDELINE											
PNL	87.0	88.8	90.5	92.6	95.9	96.4	97.6	98.8	100.5	100.4	93.8
4000. SIDELINE											
PNL	77.5	79.4	80.9	82.9	85.6	86.3	87.9	89.4	91.7	91.4	84.3
6000. SIDELINE											
PNL	71.6	73.4	74.8	76.7	79.3	80.0	81.6	83.5	86.1	85.6	77.7

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

... Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 6A; Condition 6301

a.) Model Data Measured At 15 Ft. Radius

1/3 OCTAVE BAND MODEL JET NOISE DATA 15. FT RADIUS

[illegible]	

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SUM		
P.R.		1.31	1.36		1.31	1.36
TEMP	(R)	1265.0	602.0	(K)	702.8	334.4
RHO	LB/FT3	0.034	0.072	KG/M3	0.544	1.161
VEL	FPS	1069.9	780.6	M/S	326.1	237.9

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	54.2	55.7	56.9	58.5	59.6	60.9	62.1	64.1	65.9	67.2	67.5
63	55.9	57.9	60.2	61.4	62.3	63.5	64.6	66.3	66.5	69.9	69.9
80	57.0	58.9	59.6	61.5	62.2	63.6	64.7	66.0	69.5	70.4	67.0
100	58.4	59.6	61.3	62.1	63.0	65.0	66.4	67.9	68.8	69.9	66.1
125	58.0	60.1	60.9	62.7	63.6	64.9	65.5	67.7	69.2	69.0	65.4
160	58.2	59.9	61.1	63.1	64.5	65.0	66.9	68.1	68.8	67.4	62.5
200	58.1	60.2	61.8	63.1	64.6	66.6	67.3	68.5	68.4	65.5	59.9
250	58.1	60.9	61.9	63.3	64.7	66.1	67.1	68.0	67.4	64.5	57.2
315	57.7	60.4	61.8	63.5	64.6	66.6	66.9	67.6	66.2	62.1	54.5
400	57.6	60.6	61.8	63.6	64.8	66.2	67.1	67.2	65.4	60.7	53.1
500	57.7	60.5	62.0	63.5	64.0	66.1	66.8	66.6	64.2	59.1	51.0
630	58.2	60.1	61.6	63.4	64.9	66.2	66.7	65.9	63.2	57.9	49.0
800	58.6	59.5	61.4	62.6	64.2	65.5	65.2	64.6	61.7	56.0	47.4
1000	57.6	58.1	60.5	62.2	63.7	64.6	65.0	63.6	60.1	54.7	44.0
1250	55.1	58.6	59.7	61.5	63.0	64.1	64.1	62.5	58.4	52.5	42.6
1600	53.7	58.5	58.0	60.2	61.7	62.0	62.6	60.4	56.3	49.7	39.6
2000	52.7	55.0	57.6	58.9	60.5	61.4	61.0	58.5	53.9	46.5	35.6
2500	50.8	53.1	55.2	57.1	58.8	59.5	58.0	55.9	50.9	42.7	29.5
3150	47.5	50.2	52.6	54.8	55.4	56.6	55.5	52.5	46.7	37.7	22.5
4000	44.7	47.3	49.9	51.8	52.0	52.5	52.0	47.7	42.2	32.0	15.0
5000	41.5	44.8	47.9	49.6	51.5	50.6	49.6	45.1	36.6	26.6	9.7
6300	37.1	40.5	43.0	45.4	47.2	46.6	44.0	39.9	32.6	20.9	6.0
8000	28.5	35.1	38.5	39.6	42.6	41.1	38.7	33.5	25.6	12.5	0.0
10000	21.5	25.7	29.3	31.4	32.7	31.2	20.4	22.2	12.0	0.0	0.0
OASPL	69.6	71.7	73.2	74.6	76.1	77.3	76.1	70.6	76.0	77.6	73.2
PNL	78.4	78.9	80.9	82.6	84.2	85.1	85.1	83.9	81.6	77.6	71.2
400. SIDELINE PNL	89.7	91.9	93.7	95.5	97.1	98.6	98.1	96.7	94.1	90.4	84.4
2000. SIDELINE PNL	69.1	71.0	72.9	74.0	77.2	76.6	76.2	77.5	75.3	71.3	64.5
4000. SIDELINE PNL	59.6	62.0	63.8	65.6	67.6	66.1	66.4	67.7	65.7	61.6	54.6
6000. SIDELINE PNL	52.4	55.6	57.5	59.3	60.7	61.6	62.1	61.5	59.2	55.2	45.1

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Severe Cutback Non-Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 6A; Condition 6302

a.) Model Data Measured At 15 Ft. Radius

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (INCLET)

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PCWL
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.100	71.7	75.3	77.6	78.5	76.0	79.5	81.0	83.9	85.1	86.6	93.1	[illegible]
.125	74.3	74.7	78.9	78.7	[illegible]	81.9	80.6	83.7	87.3	[illegible]	93.7	[illegible]
.160	77.0	79.7	76.5	79.3	78.9	79.9	81.0	82.6	87.6	91.6	95.2	[illegible]
.200	78.2	77.7	79.4	80.9	81.7	83.2	84.9	86.7	91.5	96.0	98.3	[illegible]
.250	77.4	79.1	80.5	81.9	82.6	84.2	85.9	88.9	93.2	97.6	99.6	[illegible]
.315	80.3	81.0	81.8	83.2	84.9	86.3	87.9	91.8	95.6	99.3	103.2	[illegible]
.400	82.2	83.6	85.4	86.9	87.6	89.1	91.4	94.9	98.5	102.6	106.7	[illegible]
.500	84.6	84.6	85.4	86.6	87.8	89.7	91.4	94.6	99.9	103.7	106.5	[illegible]
.630	86.0	85.9	86.9	87.7	89.2	91.6	93.4	96.5	99.8	103.6	106.0	[illegible]
.800	84.7	86.2	86.3	88.2	89.6	90.9	93.6	96.3	100.6	102.7	103.9	[illegible]
1.00	85.6	85.7	86.9	88.5	90.2	91.9	94.3	97.3	99.6	101.1	100.1	[illegible]
1.25	84.9	86.1	87.3	88.5	90.3	92.3	94.9	97.4	99.2	98.9	96.2	[illegible]
1.60	85.6	86.5	87.5	88.9	90.6	92.7	94.0	97.3	98.4	97.9	94.6	[illegible]
2.00	84.7	86.6	87.8	89.2	90.9	92.6	95.1	97.0	97.4	95.9	92.4	[illegible]
2.50	84.7	87.6	88.1	89.6	91.2	93.2	95.5	96.6	96.0	94.0	91.3	[illegible]
3.15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6.30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
12.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
40.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
50.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
63.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
80.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
OASPL	97.7	99.1	100.3	101.8	103.5	105.3	107.0	108.5	110.0	111.7	112.7	

OAPWL = 129.0

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 670530 TEST DATE 12/01/76 SCALE RATIO 7.0/1 RUN NUMBER 20063 CONDITION 6302

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	57.8	59.7	60.4	61.9	63.6	64.5	65.9	68.2	70.4	72.1	72.4
63	59.7	61.0	64.0	65.1	66.4	67.1	68.9	70.8	73.3	75.2	75.4
80	62.1	63.0	64.0	65.3	66.4	67.9	68.9	71.2	74.7	76.3	73.7
100	63.3	64.0	65.4	66.3	67.1	69.1	70.7	72.7	74.4	76.6	72.8
125	62.0	64.3	64.6	66.0	67.5	69.0	70.3	72.5	74.6	75.1	73.4
160	62.2	63.6	65.3	67.0	68.6	69.8	71.5	73.4	74.3	73.2	66.6
200	62.1	64.0	65.7	67.0	68.7	70.2	72.1	73.5	73.7	71.0	64.7
250	62.1	64.3	65.8	67.3	68.9	70.5	71.9	73.2	72.7	69.6	61.0
315	61.3	64.2	65.8	67.4	68.9	70.4	71.9	72.6	71.3	67.3	59.9
400	61.4	64.5	66.0	67.7	69.1	70.1	72.0	72.3	70.6	66.0	58.4
500	61.6	64.3	66.1	67.5	69.2	70.6	71.8	71.7	69.3	64.7	57.0
630	62.2	64.3	65.9	67.6	69.2	70.5	71.8	71.0	68.4	62.9	54.9
800	62.1	63.4	65.1	66.9	68.5	69.9	70.7	69.8	66.8	61.1	52.4
1000	61.6	63.1	64.7	66.4	68.1	69.5	70.3	68.8	65.5	59.0	50.1
1250	59.2	62.2	64.2	66.0	67.6	69.6	69.4	67.8	64.3	56.2	48.4
1600	58.0	61.0	63.1	64.9	66.7	67.7	67.8	65.9	62.1	55.9	45.6
2000	56.9	59.5	61.9	63.6	65.5	66.5	66.4	64.3	59.7	52.3	41.8
2500	55.1	57.7	59.9	62.1	63.8	64.7	64.4	61.9	57.2	49.7	36.7
3150	51.8	55.1	57.3	59.6	61.2	62.1	61.2	58.2	53.1	44.7	30.0
4000	48.6	52.2	54.8	56.7	58.2	58.7	57.7	53.7	48.7	38.8	21.8
5000	46.0	49.9	52.9	54.8	56.4	56.5	55.5	51.2	44.8	35.6	16.7
6300	41.6	45.3	48.7	50.5	52.5	52.3	50.8	45.9	38.6	27.4	5.9
8000	35.9	40.7	43.4	44.9	47.4	46.7	44.6	39.5	31.1	19.4	0.0
10000	26.0	30.6	34.3	36.6	38.0	36.7	34.2	28.6	17.6	2.3	0.0
OASPL	73.6	75.7	77.1	78.9	80.4	81.8	82.9	83.6	83.9	83.5	81.6
PNL	86.7	83.4	89.5	87.4	89.0	90.1	90.4	89.3	87.5	86.6	78.4

400. SIDELINE

PNL	94.0	96.4	98.3	100.2	101.9	103.6	103.4	102.4	100.0	96.5	91.7

2000. SIDELINE

PNL	73.4	76.2	78.4	80.2	81.9	82.9	83.3	82.9	81.0	77.5	71.8

4000. SIDELINE

PNL	63.3	66.3	68.2	70.0	71.5	72.6	73.4	73.7	71.4	67.9	62.0

6600. SIDELINE

PNL	56.8	60.0	61.9	63.7	65.2	66.5	67.2	67.0	65.4	61.9	56.0

THIS PAGE IS BEST QUALITY PRACTICABLE FROM COPY FURNISHED TO DDC

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Severe Cutback Non-Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 6A; Condition 6303

a.) Model Data Measured At 15 Ft. Radius

```
STAND 8706   RIG ID 070530   TEST DATE 12/01/76   SCALE RATIO 7.0/1   RUN NUMBER 26663   CONDITION 6303
                  PRIMARY   FAN              PRIMARY   FAN                                PRIMARY   FAN          PRIMARY  FAN
AREA  SQFT                           SQM                        MASS FLOW   LB/S
P.R.              1.46      1.52               1.48     1.52     THRUST,IDL  LB
TEMP  (R)         1334.0    624.0    (K)       741.1    346.7    THRUST,MEA  LB
RHO   LB/FT3      0.033     0.072    KG/M3     0.532    1.155    AREA (MOD)  SQFT
VEL   FPS         1306.9    919.3    M/S       398.3    280.2    W (MODEL)   LB/S
```

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAD CORRECTED SPL - (MODEL)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	[illegible]
	MICROPHONE ANGLES IN DEGREES											
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.100	75.0	76.2	78.4	79.1	79.6	80.6	81.6	84.3	85.5	89.6	94.6	[illegible]
.125	76.9	80.1	79.6	79.6	81.3	83.1	81.6	84.6	88.1	91.1	94.3	[illegible]
.160	77.9	80.0	79.1	80.0	79.5	80.5	81.7	83.0	88.3	92.7	96.0	[illegible]
.200	77.2	78.6	80.4	81.6	82.0	84.2	85.8	87.8	92.3	97.4	99.7	[illegible]
.250	78.5	80.7	81.6	83.1	83.0	85.2	87.1	89.9	94.5	96.7	100.4	[illegible]
.315	81.2	81.9	82.9	84.4	85.6	87.2	89.4	92.0	96.7	100.7	104.4	[illegible]
.400	83.1	84.6	86.2	87.5	86.8	90.3	92.3	95.4	99.6	103.0	107.4	[illegible]
.500	85.0	85.9	86.0	87.0	88.7	90.4	92.5	96.0	102.2	105.2	109.9	[illegible]
.630	87.4	87.1	88.2	89.1	90.5	92.0	94.6	97.6	101.0	105.3	109.9	[illegible]
.800	86.2	87.0	87.5	89.5	90.5	92.1	94.2	97.6	101.3	104.5	105.5	[illegible]
1.00	86.2	86.9	87.9	89.6	91.2	93.1	95.6	98.5	101.2	102.7	102.1	[illegible]
1.25	86.0	87.1	88.3	89.7	91.5	93.4	95.9	98.7	100.5	100.5	96.3	[illegible]
1.60	86.0	87.0	88.6	90.1	91.7	93.6	96.0	98.6	99.6	99.5	96.6	[illegible]
2.00	85.6	87.7	88.0	90.5	92.1	94.1	96.3	98.3	98.7	97.6	94.1	[illegible]
2.50	85.9	88.0	89.1	90.7	92.3	94.3	96.6	96.2	98.3	96.4	92.9	[illegible]
3.15	86.5	88.1	89.4	90.9	92.5	94.5	96.5	97.9	97.3	95.0	91.9	[illegible]
4.00	87.0	88.4	89.4	91.2	92.9	94.6	96.1	97.5	96.7	94.2	90.6	[illegible]
5.00	87.3	88.6	89.2	90.9	92.0	94.0	96.4	96.7	95.7	93.1	89.4	[illegible]
6.30	86.9	88.6	89.1	90.9	92.8	94.5	96.2	96.4	95.2	92.5	88.4	[illegible]
8.00	85.6	87.7	89.1	91.0	92.6	94.5	96.0	95.9	94.5	92.1	88.2	[illegible]
10.0	85.1	87.2	88.6	90.5	92.4	94.0	95.6	95.2	93.8	91.7	87.7	[illegible]
12.5	85.0	86.7	88.3	90.1	92.1	93.7	94.9	94.3	92.7	90.7	86.6	[illegible]
16.0	84.5	86.0	87.4	89.6	91.6	93.1	94.1	93.5	91.6	89.4	84.7	[illegible]
20.0	82.7	84.6	86.3	88.2	90.3	91.6	92.3	91.4	89.7	87.6	82.0	[illegible]
25.0	81.5	83.6	85.3	87.2	89.0	90.1	91.0	89.3	88.0	84.8	79.6	[illegible]
31.5	79.6	81.8	84.0	85.7	88.1	88.6	89.3	87.7	85.4	82.6	77.3	[illegible]
40.0	77.4	79.6	81.8	83.5	85.6	86.5	87.1	85.4	82.7	80.2	74.4	[illegible]
50.0	74.8	76.9	79.0	80.2	83.1	83.6	83.8	82.3	79.7	78.9	73.2	[illegible]
63.0	71.6	73.4	75.5	77.5	79.3	79.6	80.3	78.6	76.1	74.1	72.0	[illegible]
80.0	67.1	69.6	72.0	73.2	75.2	76.0	76.2	74.7	72.7	70.8	71.1	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	98.9	100.2	102.4	103.8	104.7	106.4	108.3	109.8	111.3	114.8	114.2	

OAPWL = 13[illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

```
STAND 8706   RIG ID 070530   TEST DATE 12/01/76   SCALE RATIO 7.0/1   RUN NUMBER 26663   CONDITION 6303
                  PRIMARY   FAN              PRIMARY   FAN                           PRIMARY   FAN           PRIMARY  FAN
AREA  SQFT                           SQM                        MASS FLOW   LB/S    101.9     135.7   KG/S   46.2     61.6
P.R.              1.46      1.52               1.48     1.52     THRUST,IDL  LB                        N
TEMP  (R)         1334.0    624.0    (K)       741.1    346.7    THRUST,MEA  LB      0.0                N      0.0
RHO   LB/FT3      0.033     0.072    KG/M3     0.532    1.155    AREA (MOD)  SQFT                      SQM
VEL   FPS         1306.9    919.3    M/S       398.3    280.2    W (MODEL)   LB/S    2.1       2.8     KG/S   0.9      1.3
```

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	58.7	60.1	61.5	63.1	64.2	65.4	66.9	69.2	71.5	73.3	73.6
63	60.6	62.8	64.8	66.2	67.4	68.5	69.8	71.6	74.4	76.4	76.6
80	63.3	64.1	65.7	66.5	67.3	68.6	70.0	72.4	75.9	77.7	75.1
100	64.7	65.2	66.7	67.7	69.6	70.1	71.9	73.6	75.6	77.7	74.7
125	63.5	65.7	65.0	68.1	69.0	70.2	71.5	73.8	75.9	76.9	74.3
160	63.4	64.8	66.3	68.1	69.6	71.6	72.8	74.6	75.7	74.6	70.8
200	63.2	65.0	66.7	67.2	69.9	71.3	73.1	74.6	75.0	72.6	66.8
250	63.1	65.4	66.9	68.5	70.6	71.4	73.4	74.5	74.1	71.4	64.8
315	62.6	65.3	66.5	68.5	70.1	71.7	73.1	73.9	72.6	69.0	61.6
400	62.6	65.5	67.6	68.8	70.2	71.6	73.3	73.7	72.1	67.6	60.6
500	62.9	65.3	67.1	68.8	70.2	71.7	72.9	73.1	70.7	65.8	58.4
630	63.2	65.4	66.4	68.7	70.4	71.8	72.9	72.4	69.8	64.5	56.4
800	63.1	64.6	66.3	68.7	69.9	71.2	72.7	71.2	68.2	62.7	54.1
1000	62.2	64.2	65.8	67.7	69.5	70.7	71.5	70.3	67.6	61.2	51.8
1250	60.4	63.4	65.3	67.4	68.8	70.7	70.8	69.2	65.6	59.9	50.2
1600	59.0	62.1	64.1	66.2	67.9	68.9	69.3	67.5	63.7	57.9	47.4
2000	58.0	60.8	63.0	65.0	66.8	67.8	67.9	65.6	61.4	55.3	43.7
2500	56.3	59.0	61.1	63.5	65.3	66.1	65.9	63.4	58.6	51.8	38.9
3150	53.6	56.3	58.5	60.9	62.5	63.3	62.6	59.6	54.6	46.6	31.7
4000	49.8	53.4	56.6	58.2	59.7	59.9	59.3	55.2	50.1	40.6	23.7
5000	47.1	51.6	54.1	56.1	58.2	57.6	57.0	57.6	46.2	36.7	16.5
6300	42.5	46.6	49.9	51.9	53.9	53.5	52.2	47.4	34.9	29.3	7.9
8000	37.0	41.3	44.6	46.2	46.7	46.0	46.0	40.9	32.5	20.0	0.0
10000	27.6	33.6	35.5	38.0	39.2	38.4	35.7	29.3	19.1	4.1	0.0
LASPL	74.6	76.8	78.4	80.2	81.6	82.4	84.1	84.9	85.1	85.6	82.6
PNL	81.9	84.6	86.6	88.7	90.4	92.4	91.8	90.8	89.9	85.9	80.4

	400. SIDELINE										
PNL	95.1	97.6	99.5	101.5	103.3	104.3	104.6	103.8	101.4	98.2	93.1
	2000. SIDELINE										
PNL	74.6	77.4	79.5	81.5	83.2	84.2	84.7	84.3	82.9	79.4	73.1
	4000. SIDELINE										
PNL	64.5	67.4	69.3	71.3	72.8	74.0	74.4	74.6	72.9	69.8	64.1
	6000. SIDELINE										
PNL	58.1	61.1	63.1	65.6	66.5	67.7	68.6	68.6	66.9	63.8	58.6

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Severe Cutback Non-Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 6A; Condition 6304

a.) Model Data Measured At 15 Ft. Radius

```
STAND 8206   RIG ID 07U530   TEST DATE 12/01/76   SCALE RATIO 7.0/1   RUN NUMBER [illegible]   CONDITION 6304
                  PRIMARY   FAN            PRIMARY   FAN                          PRIMARY   FAN        PRIMARY   FAN
AREA   SQFT                         SQM                 MASS FLOW   LB/S   [illegible]        KG/S   [illegible]
P.R.            1.74      1.71             1.74      1.71   THRUST,IDL  LB
TEMP   (R)    1419.6     696.0     (K)     788.7     361.1   THRUST,MTA  LB         [illegible]     N    [illegible]
RHO  LB/FT3    0.032     0.071   KG/M3     0.520     1.145   AREA (MOD)  SQFT                     SQM
VEL    FPS    1580.5    1052.3     M/S     483.6     320.7   W (MODEL)   LB/S   [illegible]        KG/S   [illegible]

1/3 OCTAVE BAND MODEL JET NOISE DATA  15.0FT RADIUS          RAW CORRECTED SPL - [illegible]
```

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PWL
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.125	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.160	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.200	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.315	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.400	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.630	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.800	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.00	92.5	93.2	93.8	95.2	96.7	99.0	101.7	105.1	108.7	111.8	112.7	[illegible]
1.25	92.1	93.2	94.2	95.4	97.1	98.8	101.9	105.2	107.8	109.5	109.6	[illegible]
1.60	91.5	93.1	94.2	95.5	97.7	99.1	102.1	105.1	106.8	107.6	107.6	[illegible]
2.00	91.0	92.0	94.1	95.4	97.3	99.3	102.3	104.9	105.8	105.3	104.8	[illegible]
2.50	90.9	92.9	94.6	95.8	97.5	99.7	102.8	104.6	105.7	103.4	102.6	[illegible]
3.15	91.5	93.1	94.5	95.9	97.7	100.1	102.9	104.4	104.4	102.6	101.6	[illegible]
4.00	92.0	93.4	94.7	96.4	98.2	100.5	103.0	104.1	103.6	102.1	100.2	[illegible]
5.00	92.3	93.1	94.4	96.2	98.1	100.3	102.7	103.4	102.7	100.9	99.6	[illegible]
6.30	92.1	93.4	94.4	96.2	98.3	100.3	102.6	103.1	102.1	100.4	[illegible]	[illegible]
8.00	90.9	93.2	94.5	96.4	98.3	100.6	102.4	102.0	101.6	100.2	97.8	[illegible]
10.0	90.7	92.0	94.9	96.2	98.2	100.4	102.6	102.1	101.4	99.9	97.4	[illegible]
12.5	90.8	92.2	94.2	96.0	98.2	100.2	101.7	101.7	100.6	99.4	96.2	[illegible]
16.0	90.6	91.6	93.4	95.7	97.6	99.7	100.9	101.0	100.1	98.7	94.1	[illegible]
20.0	88.3	90.3	92.2	94.2	96.5	98.3	99.4	99.1	98.4	96.2	91.5	[illegible]
25.0	87.2	89.3	91.5	93.4	95.5	97.6	98.6	97.1	97.0	94.2	89.1	[illegible]
31.5	85.3	87.5	90.3	92.6	94.8	95.7	96.7	95.6	94.8	92.0	86.7	[illegible]
40.0	83.2	85.4	88.1	89.9	92.4	93.7	94.5	93.4	92.2	89.6	83.6	[illegible]
50.0	80.5	82.6	85.2	86.8	89.0	90.8	91.4	90.5	89.0	86.5	81.5	[illegible]
63.0	77.3	79.2	81.0	83.9	86.1	86.7	87.9	86.7	85.2	83.4	79.0	[illegible]
80.0	73.0	75.4	78.2	79.5	81.8	83.4	83.9	82.8	81.3	79.9	76.0	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

OAPWL = 137.1

OASPL	104.3	105.6	106.9	108.5	110.3	112.2	114.5	116.3	118.4	120.9	121.6

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

```
STAND 8206   RIG ID 07U530   TEST DATE 12/01/76   SCALE RATIO 7.0/1   RUN NUMBER [illegible]   CONDITION 6304
                  PRIMARY   FAN            PRIMARY   FAN                          PRIMARY   FAN        PRIMARY   FAN
AREA   SQFT                         SQM                 MASS FLOW   LB/S   [illegible]  [illegible]  KG/S   [illegible]
P.R.            1.74      1.71             1.74      1.71   THRUST,IDL  LB
TEMP   (R)    1419.6     696.0     (K)     788.7     361.1   THRUST,MTA  LB       0.0      N      0.0
RHO  LB/FT3    0.032     0.071   KG/M3     0.520     1.145   AREA (MOD)  SQFT                   SQM
VEL    FPS    1580.5    1052.3     M/S     483.6     320.7   W (MODEL)   LB/S     2.7     3.0    KG/S    1.2    1.4

FAA DAY                    1/3 OCTAVE BAND

        1200. SIDELINE
                                       ANGLE IN DEGREES
```

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	63.7	64.5	66.0	67.7	68.4	69.0	71.4	74.2	76.8	78.9	79.4
63	65.5	67.7	69.4	70.6	71.4	73.0	74.5	77.1	80.3	82.5	82.4
80	68.3	69.1	70.0	71.2	71.9	73.4	75.2	78.0	82.4	84.6	81.4
100	70.6	70.6	72.0	73.1	73.8	75.1	77.4	80.2	83.2	85.4	81.8
125	69.2	71.5	71.7	73.0	74.5	75.4	77.1	80.6	85.6	85.4	82.4
160	69.7	71.1	72.2	73.7	75.4	76.4	78.4	81.2	83.2	83.9	81.2
200	69.3	71.1	72.6	73.9	75.5	76.7	79.1	81.3	82.3	81.6	78.1
250	68.6	70.9	72.5	73.9	75.5	76.9	79.2	81.6	81.1	79.7	76.0
315	67.8	70.4	72.1	73.6	75.3	76.9	79.1	80.5	79.7	76.7	72.3
400	67.6	70.4	71.9	73.9	75.4	77.2	79.5	80.3	79.0	75.1	69.9
500	67.9	70.3	72.2	73.0	75.4	77.3	79.3	79.6	77.8	73.4	66.1
630	68.2	70.4	72.2	74.0	75.1	77.3	79.2	79.6	76.7	72.4	66.0
800	68.1	69.7	71.5	73.5	75.2	76.9	78.5	77.9	75.2	70.5	63.7
1000	67.4	69.3	71.1	73.0	75.0	76.5	77.9	77.0	73.9	69.1	61.6
1250	65.7	68.9	70.7	72.8	74.5	76.3	77.2	76.1	72.9	68.0	59.8
1600	64.6	67.7	69.9	71.9	73.7	75.3	75.9	74.4	71.3	66.1	57.1
2000	63.6	66.3	68.9	70.9	72.0	74.1	74.7	73.6	69.3	64.0	53.3
2500	61.8	64.6	67.1	69.6	71.5	72.7	72.7	70.9	67.1	60.6	48.1
3150	58.6	62.6	64.8	66.9	68.9	70.0	69.7	67.3	63.9	55.8	41.2
4000	55.5	59.2	62.2	64.0	66.2	66.8	66.3	65.0	59.1	50.6	33.2
5000	52.6	56.7	60.4	62.4	64.9	64.9	64.2	60.5	55.8	46.3	27.9
6300	48.3	52.4	56.2	58.3	60.5	60.7	59.6	55.4	49.6	38.7	17.1
8000	42.7	47.0	54.8	52.0	55.4	55.2	53.6	49.1	41.8	29.6	5.7
10000	32.7	37.0	44.8	44.4	46.1	45.1	43.3	37.4	26.2	13.4	0.0
OASPL	80.2	82.2	83.6	85.5	87.0	88.5	90.2	91.3	92.2	92.7	90.6
PNL	87.0	90.3	92.5	94.6	96.4	97.7	98.4	97.6	96.5	94.5	89.9
500. SIDELINE											
PNL	100.7	103.2	105.3	107.4	109.2	110.6	111.5	110.4	109.3	106.6	102.6
2000. SIDELINE											
PNL	80.4	83.0	85.3	87.3	89.1	90.4	91.2	91.2	90.2	86.4	83.5
4000. SIDELINE											
PNL	70.1	72.4	74.4	76.0	78.4	79.0	81.3	81.5	80.8	76.6	73.0
6400. SIDELINE											
PNL	63.7	66.6	68.6	70.5	72.1	73.4	75.6	75.2	74.6	73.1	67.7

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Severe Cutback Non-Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 6A; Condition 6305

a.) Model Data Measured At 15 Ft. Radius

STAND A206 RIG ID 67N53A TEST DATE 12/01/76 SCALE RATIO 7.0/1 RUN NUMBER 20463 CONDITION 6305

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		1.79	1.75		1.79	1.75
TEMP	(R)	1427.0	663.0	(K)	792.8	368.3
RHO	LB/FT3	0.033	0.071	KG/M3	0.521	1.130
VEL	FPS	1630.0	1086.2	M/S	496.6	331.1

MASS FLOW LB/S, THRUST,IDL LB, THRUST,MIX LB, AREA (MOD) SQFT, W (MOD) LB/S: [illegible]

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW [illegible]

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PNDB
					MICROPHONE ANGLES IN DEGREES							
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.100	78.4	81.9	83.7	84.5	84.7	85.4	87.1	89.6	90.9	94.8	100.0	[illegible]
.125	80.4	83.2	84.3	86.0	86.6	88.1	88.9	89.8	93.6	96.8	104.4	[illegible]
.160	84.2	86.6	84.0	85.4	84.5	85.3	87.3	89.1	93.6	96.9	107.5	[illegible]
.200	82.0	84.6	85.9	87.1	88.2	89.1	91.2	93.2	98.4	103.4	106.0	[illegible]
.250	83.9	85.4	86.7	88.5	89.1	90.0	92.4	95.6	100.5	105.2	107.5	[illegible]
.315	86.9	87.3	88.3	89.5	90.4	92.4	94.7	98.0	103.6	107.4	111.2	[illegible]
.400	89.1	90.3	91.6	92.6	93.9	95.6	97.5	101.7	106.0	111.0	114.5	[illegible]
.500	91.9	92.0	92.4	93.4	94.3	96.1	98.0	102.0	106.0	113.2	113.4	[illegible]
.630	94.3	93.7	94.5	95.3	96.5	98.0	101.1	105.1	109.0	114.2	114.1	[illegible]
.800	93.4	94.6	94.1	96.3	97.1	98.4	100.9	105.2	110.5	114.6	115.0	[illegible]
1.00	93.9	94.3	94.9	96.2	97.0	100.3	102.9	106.1	110.2	113.0	114.5	[illegible]
1.25	93.7	94.7	94.7	96.0	98.3	100.7	103.3	106.6	109.4	111.7	117.3	[illegible]
1.60	93.2	94.7	95.0	96.7	98.2	100.5	103.2	106.3	108.4	110.1	110.9	[illegible]
2.00	92.5	94.1	95.4	96.6	98.3	100.6	103.5	106.1	107.2	107.5	108.0	[illegible]
2.50	92.2	94.3	95.1	96.8	98.6	100.9	103.9	105.9	106.4	106.0	106.0	[illegible]
3.15	92.7	94.3	95.5	97.0	98.8	101.2	104.2	105.7	105.7	104.0	104.9	[illegible]
4.00	93.1	94.6	95.7	97.4	99.2	101.7	104.3	105.4	105.0	103.8	103.3	[illegible]
5.00	93.4	94.3	95.4	97.1	99.2	101.5	104.0	104.6	104.0	102.9	101.9	[illegible]
6.30	93.2	94.3	95.4	97.3	99.2	101.5	103.6	104.4	103.5	102.5	100.9	[illegible]
8.00	92.1	94.3	95.5	97.4	99.3	101.7	103.6	103.8	103.0	102.3	100.4	[illegible]
10.0	91.6	93.7	95.3	97.2	99.3	101.4	103.1	103.5	102.7	101.9	100.6	[illegible]
12.5	91.7	93.3	95.1	97.0	99.3	101.3	102.8	103.0	101.9	101.2	98.5	[illegible]
16.0	91.6	92.7	94.4	96.7	96.9	100.9	102.1	102.4	101.4	100.0	96.4	[illegible]
20.0	89.2	91.4	93.2	95.4	97.0	99.6	100.6	100.6	99.4	97.0	93.6	[illegible]
25.0	88.6	90.5	92.4	94.6	96.6	98.3	99.4	98.5	98.5	96.6	91.2	[illegible]
31.5	86.2	88.7	91.3	93.2	95.8	97.0	98.1	97.1	96.3	93.9	89.6	[illegible]
40.0	84.6	86.5	89.2	91.6	93.6	95.6	95.8	96.0	93.9	91.4	85.7	[illegible]
50.0	81.6	83.8	86.3	87.9	91.6	92.7	92.9	92.0	90.7	88.2	83.4	[illegible]
63.0	78.3	80.2	82.9	85.1	87.2	88.1	89.5	88.4	87.0	85.1	81.7	[illegible]
80.0	73.9	76.5	79.3	80.7	83.1	84.7	85.5	84.5	83.2	81.4	79.8	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
OASPL	105.5	106.8	107.9	109.5	111.3	113.4	115.7	117.5	119.7	122.5	123.3	

OASPL = [illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND A206 RIG ID 67N53A TEST DATE 12/01/76 SCALE RATIO 7.0/1 RUN NUMBER 20463 CONDITION 6305

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		1.79	1.75		1.79	1.75
TEMP	(R)	1427.0	663.0	(K)	792.8	368.3
RHO	LB/FT3	0.033	0.071	KG/M3	0.521	1.136
VEL	FPS	1630.0	1086.2	M/S	496.6	331.1

		PRIMARY	FAN		PRIMARY	FAN
MASS FLOW	LB/S	135.2	149.6	KG/S	61.3	67.8
THRUST,IDL	LB			N		
THRUST,MIX	LB		0.0	N		0.0
AREA (MOD)	SQFT			SQM		
W (MOD)	LB/S	2.8		3.0 KG/S	1.3	1.4

FAA DAY — 1/3 OCTAVE BAND — 1200. SIDELINE

FREQ	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
					ANGLE IN DEGREES						
50	64.6	65.5	66.9	68.2	69.0	70.6	72.2	75.2	77.8	80.6	80.4
63	66.6	68.5	70.2	71.3	72.5	74.4	75.6	78.1	81.4	83.6	83.6
80	69.4	70.2	71.0	72.1	72.0	74.3	76.3	79.0	83.6	85.8	87.0
100	71.6	71.8	72.6	73.9	75.6	76.1	78.6	81.3	84.6	86.6	87.9
125	70.7	72.7	73.4	74.7	75.6	76.3	78.2	81.4	85.2	86.6	85.0
160	71.1	72.7	73.3	74.7	76.2	78.2	80.1	82.4	84.7	85.9	83.0
200	70.9	72.6	74.1	75.1	76.7	78.3	80.3	82.7	83.9	83.6	80.6
250	70.3	72.3	73.9	75.1	76.5	78.3	80.3	82.2	82.7	82.0	79.1
315	69.7	71.7	73.4	75.0	76.5	78.4	80.3	81.7	81.2	79.7	75.9
400	68.9	71.6	73.0	74.9	76.5	78.6	80.6	81.4	80.1	77.7	73.2
500	69.3	71.5	73.2	74.9	76.5	78.6	80.6	80.6	79.1	75.6	71.6
630	69.3	71.5	73.2	75.0	76.7	78.7	80.5	80.3	78.1	74.3	69.0
800	68.7	71.2	72.9	74.7	76.4	78.4	80.0	79.3	76.5	72.3	66.6
1000	68.5	70.5	72.1	74.1	75.9	77.7	79.1	78.3	75.3	71.2	64.3
1250	66.9	70.0	71.7	73.8	75.5	77.4	78.4	77.1	74.1	70.1	62.4
1600	65.5	68.6	70.8	72.9	74.6	76.3	77.0	[illegible]	72.0	68.1	59.7
2000	64.7	67.4	69.8	71.9	74.0	75.4	75.0	[illegible]	70.0	65.8	55.8
2500	62.8	65.7	68.1	70.6	72.6	73.9	[illegible]	[illegible]	68.4	62.4	50.4
3150	59.5	63.1	65.6	68.1	70.6	73.3	[illegible]	68.6	64.6	57.6	43.3
4000	55.3	60.5	63.1	65.6	67.5	68.1	67.7	64.4	60.6	51.6	35.3
5000	57.7	57.9	61.4	63.0	65.9	66.2	65.0	62.0	57.1	48.0	34.2
6300	49.1	53.5	57.3	58.4	61.7	62.0	60.9	58.2	51.1	46.5	19.2
8000	43.8	48.2	51.9	53.9	56.6	56.6	55.1	56.6	43.5	31.3	7.6
10000	33.7	32.6	42.9	45.6	47.2	46.5	44.9	39.1	36.6	15.1	0.0
OASPL	81.5	83.4	84.9	86.5	88.0	89.7	91.6	92.5	93.6	94.3	91.6
PNL	88.7	91.4	93.5	95.7	97.5	98.9	99.7	99.1	97.4	96.3	91.9
			400. SIDELINE								
PNL	107.6	109.5	108.3	110.4	110.3	111.8	112.7	112.1	110.7	108.4	104.1
			2000. SIDELINE								
PNL	81.5	84.5	86.4	[illegible]	[illegible]	91.6	92.4	92.5	91.7	90.2	85.7
			4000. SIDELINE								
PNL	72.4	74.2	76.0	77.9	79.5	81.1	[illegible]	82.7	82.4	81.0	76.6
			6000. SIDELINE								
PNL	65.1	66.6	69.7	71.8	73.2	74.7	76.2	76.5	76.4	75.6	69.7

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Severe Cutback Non-Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 6A; Condition 6306

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG 16 GT053U TEST DATE 12/01/76 SCALE RATIO 7.0/1 RUN NUMBER 7606 CONDITION 6306

	PRIMARY	FAN		PRIMARY	FAN
AREA SQFT			SQM		
P.R.	1.86	1.70		1.86	1.70
TEMP (R)	1467.6	660.6	(K)	815.0	371.1
RHO LB/FT3	0.032	0.070	KG/M3	0.511	1.120
VEL FPS	1696.5	1100.0	M/S	517.1	330.0

MASS FLOW LB/S, THRUST,IDL LB, THRUST,MEA LB, AREA (MOD) SQFT, W (MODEL) LB/S: [illegible]

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — FAA CORRECTED [illegible]

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	[illegible]
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.100	78.8	82.3	84.1	86.7	85.1	85.7	87.4	90.1	91.5	95.0	100.1	[illegible]
.125	81.2	85.0	84.4	85.0	87.5	88.7	87.2	90.5	94.1	97.5	101.1	[illegible]
.160	84.7	87.3	85.3	86.6	85.3	85.9	87.8	89.7	94.5	94.5	103.1	[illegible]
.200	83.0	84.0	86.5	87.3	88.5	84.7	91.0	93.8	99.1	104.4	106.6	[illegible]
.250	84.6	86.3	87.5	89.1	89.0	90.9	95.3	96.1	101.4	106.0	108.5	[illegible]
.315	87.0	88.6	89.1	90.2	91.3	93.1	95.4	99.4	103.9	108.4	112.1	[illegible]
.400	89.7	91.1	92.4	93.5	94.0	96.5	98.0	102.6	107.4	112.0	115.5	[illegible]
.500	92.0	92.7	93.6	93.9	95.1	97.1	99.6	103.0	109.9	114.3	114.5	[illegible]
.630	94.9	94.3	95.2	96.5	97.2	98.0	101.9	106.1	110.8	115.4	114.5	[illegible]
.800	94.1	95.2	96.9	97.0	97.9	99.2	101.0	106.3	111.5	115.7	115.9	[illegible]
1.00	94.6	95.1	96.0	97.0	98.7	101.2	103.5	107.3	111.4	115.3	115.4	[illegible]
1.25	94.8	95.7	96.8	97.0	99.4	101.1	104.4	107.6	110.6	113.5	113.5	[illegible]
1.60	94.5	95.0	96.0	97.7	99.3	101.5	104.4	107.4	109.5	112.1	112.6	[illegible]
2.00	93.7	95.1	96.3	97.4	99.4	101.6	104.6	107.1	110.4	109.5	110.5	[illegible]
2.50	93.3	95.1	96.2	97.7	99.5	101.9	104.9	107.0	107.8	107.9	108.7	[illegible]
3.15	93.6	95.2	96.3	97.0	99.6	102.3	105.2	106.9	106.1	106.6	107.6	[illegible]
4.00	94.6	95.4	96.7	98.1	100.6	102.7	105.3	106.5	106.2	106.0	105.9	[illegible]
5.00	94.2	95.0	96.3	97.9	100.1	102.6	105.0	105.7	105.2	105.0	104.6	[illegible]
6.30	94.6	95.1	96.2	98.6	100.2	102.7	104.0	105.3	104.7	104.5	103.6	[illegible]
8.00	93.7	94.9	96.4	98.2	100.3	102.9	104.6	105.0	104.2	104.3	102.9	[illegible]
10.0	92.4	94.6	96.2	97.8	100.3	102.5	104.3	104.5	103.0	103.9	102.4	[illegible]
12.5	92.5	94.0	96.6	97.7	100.1	102.4	103.9	104.1	103.1	103.2	100.7	[illegible]
16.0	91.8	93.6	95.1	97.5	99.7	101.9	103.1	103.7	102.5	102.1	98.8	[illegible]
20.0	89.9	92.1	94.0	96.1	98.5	100.5	101.6	101.6	101.0	99.9	96.1	[illegible]
25.0	88.0	91.3	93.5	95.3	97.6	99.3	100.5	99.7	99.6	97.9	93.6	[illegible]
31.5	86.9	89.5	92.1	93.9	96.9	97.9	99.2	98.5	97.5	96.0	91.4	[illegible]
40.0	86.7	87.7	90.1	91.0	94.6	95.9	97.1	96.2	95.1	93.6	88.0	[illegible]
50.0	82.2	84.6	87.2	88.0	92.0	93.7	94.0	93.3	92.2	90.6	85.9	[illegible]
63.0	79.1	81.1	83.0	85.9	88.3	89.3	90.7	89.9	88.6	87.6	84.0	[illegible]
80.0	76.6	77.4	80.2	81.7	84.3	86.0	86.8	86.1	85.0	84.2	82.1	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
OSPL	106.3	107.6	108.8	110.3	112.3	114.4	116.7	118.6	120.8	123.9	124.6	

MAXPNL = [illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG 16 GT053U TEST DATE 12/01/76 SCALE RATIO 7.0/1 RUN NUMBER 7606 CONDITION 6306

	PRIMARY	FAN		PRIMARY	FAN
AREA SQFT			SQM		
P.R.	1.86	1.70		1.86	1.70
TEMP (R)	1467.6	660.6	(K)	815.0	371.1
RHO LB/FT3	0.032	0.070	KG/M3	0.511	1.120
VEL FPS	1696.5	1100.0	M/S	517.1	330.0

MASS FLOW LB/S, THRUST,IDL LB, THRUST,MEA LB, AREA (MOD) SQFT, W (MODEL) LB/S: [illegible]

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	65.1	66.2	67.7	68.9	69.9	71.3	72.9	75.6	78.7	81.6	81.3
63	67.2	69.3	71.0	72.2	73.4	74.7	76.7	79.6	82.2	84.6	84.6
80	70.1	70.9	71.6	72.6	73.7	75.3	77.1	80.0	84.7	86.9	84.6
100	72.2	72.4	73.7	74.9	75.7	76.9	79.7	82.3	85.4	86.9	83.6
125	73.4	73.3	73.6	75.6	76.4	77.3	78.9	82.5	85.4	87.8	83.7
160	72.6	73.6	74.4	75.5	77.1	79.1	81.0	82.5	86.1	88.1	84.7
200	72.8	73.0	75.2	76.3	77.8	79.0	81.6	83.7	85.9	87.4	84.3
250	71.6	73.6	74.9	76.1	77.6	79.3	81.5	83.9	85.4	85.6	82.4
315	70.5	72.7	74.3	75.6	77.4	79.2	81.4	82.7	83.0	84.6	81.2
400	70.8	72.6	74.1	75.8	77.4	79.4	81.6	82.5	82.3	80.9	77.9
500	70.6	72.4	74.2	75.7	77.3	79.5	81.6	82.5	81.6	79.1	75.8
630	70.2	72.4	74.2	75.7	77.5	79.7	81.5	82.1	80.2	77.4	74.1
800	70.0	71.6	73.4	75.2	77.2	79.2	80.0	81.4	79.3	76.3	71.7
1000	69.3	71.3	72.9	74.8	76.9	78.9	80.1	80.2	77.7	74.6	69.3
1250	67.5	70.6	72.6	74.0	76.5	78.6	79.4	79.7	76.5	73.7	67.0
1600	66.3	69.5	71.7	73.5	75.6	77.4	78.2	78.3	75.3	72.1	64.9
2000	65.5	68.1	70.7	72.6	74.8	76.5	76.9	76.8	73.7	70.1	62.1
2500	63.6	66.4	68.8	71.2	73.4	74.9	74.9	75.4	71.8	67.8	58.0
3150	60.7	63.8	66.4	68.8	70.9	72.2	71.9	73.1	69.5	64.5	57.8
4000	57.1	61.3	64.2	66.3	66.3	69.1	68.8	69.8	65.9	59.5	45.8
5000	54.4	58.7	62.2	64.3	67.8	67.1	66.7	65.6	61.7	53.7	37.7
6300	49.8	54.2	56.2	60.2	62.7	62.5	62.2	63.4	56.3	50.1	32.6
8000	44.4	49.6	52.8	56.8	57.6	57.6	56.2	58.2	52.3	42.7	21.5
10000	34.5	39.5	43.8	46.4	41.3	47.7	46.1	51.4	45.0	33.7	10.1
OASPL	82.4	84.2	86.0	87.2	89.6	91.7	92.4	93.6	94.7	95.7	92.0
PNL	89.6	91.6	94.4	96.4	98.4	99.9	100.7	100.7	99.1	98.1	93.7

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
400. SIDELINE PNL	102.6	105.1	107.2	109.2	111.2	112.0	113.7	115.3	111.6	110.1	105.9
2000. SIDELINE PNL	82.4	85.0	87.2	89.2	91.1	92.7	93.5	93.6	92.0	91.9	87.4
4000. SIDELINE PNL	72.4	75.1	77.0	78.8	80.5	82.1	83.5	83.9	83.6	82.8	77.7
6000. SIDELINE PNL	66.1	68.8	70.7	72.5	74.1	75.7	77.2	77.6	77.6	76.7	71.3

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Severe Cutback Non-Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 6A; Condition 6307

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG TU 070530 TEST DATE 12/01/76 SCALE RATIO 7.0/1 RUN NUMBER 20003 CONDITION 6307

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		1.97	1.67		1.97	1.67
TEMP	(R)	1470.0	670.0	(K)	821.1	376.7
RHO	LB/FT3	0.032	0.070	KG/M3	0.515	1.125
VEL	FPS	1779.3	1154.9	M/S	542.3	352.0

MASS FLOW LB/S; THRUST,IDL LB; THRUST,MEA LB; AREA (NOZ) SQFT; W (MODEL) LB/S [illegible]

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	[illegible]
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.100	80.8	84.1	86.6	86.7	87.2	88.0	89.3	91.7	93.3	97.3	101.5	[illegible]
.125	87.4	87.4	88.2	86.0	88.0	90.3	88.6	91.0	95.0	99.1	102.8	[illegible]
.160	88.2	88.7	86.9	87.6	88.9	87.0	89.5	91.0	96.3	101.1	104.8	[illegible]
.200	84.6	85.7	87.7	89.0	90.3	91.4	93.3	95.2	100.7	105.6	106.2	[illegible]
.250	85.9	87.2	88.6	90.4	91.4	92.6	94.3	97.4	102.0	107.3	109.6	[illegible]
.315	88.9	89.6	90.2	91.6	92.0	94.0	96.9	100.0	105.4	109.0	113.6	[illegible]
.400	91.1	9[illegible].1	93.3	94.7	96.2	98.0	100.1	104.1	109.1	113.5	116.7	[illegible]
.500	93.9	94.1	94.4	95.5	96.6	98.0	100.9	105.0	111.6	115.9	115.6	[illegible]
.630	94.4	95.7	96.5	97.9	98.0	100.4	103.3	107.7	113.0	[illegible]	[illegible]	[illegible]
.800	95.4	96.0	96.5	95.0	99.6	100.0	103.2	107.9	113.9	117.7	117.4	[illegible]
1.00	96.5	97.1	97.7	98.9	100.5	103.1	105.4	109.1	113.8	117.6	117.9	[illegible]
1.25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.60	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3.15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6.30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
12.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
40.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
50.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
63.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
80.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

OAPWL = [illegible]

OASPL [illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG TU 070530 TEST DATE 12/01/76 SCALE RATIO 7.0/1 RUN NUMBER 20003 CONDITION 6307

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		1.97	1.67		1.97	1.67
TEMP	(R)	1470.0	670.0	(K)	821.1	376.7
RHO	LB/FT3	0.032	0.070	KG/M3	0.515	1.125
VEL	FPS	1779.3	1154.9	M/S	542.3	352.0

	PRIMARY	FAN		PRIMARY	FAN
MASS FLOW LB/S	149.9	150.9	KG/S	68.0	68.5
THRUST,IDL LB			N		
THRUST,MEA LB	0.0		N	0.0	
AREA (NOZ) SQFT			SQM		
W (MODEL) LB/S	3.1	3.1	KG/S	1.4	1.4

FAA DAY

1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	66.4	67.2	68.8	70.3	71.4	73.6	74.4	77.2	80.2	82.6	82.0
63	68.6	70.3	71.9	73.4	74.4	76.7	77.6	80.5	83.9	86.1	85.9
80	71.4	72.3	73.0	74.2	75.6	77.0	78.4	81.4	86.4	86.5	85.0
100	73.7	73.8	75.0	76.5	77.3	78.5	80.6	83.9	87.6	84.5	85.4
125	72.7	74.9	75.0	77.2	78.1	78.9	80.5	84.1	88.5	90.1	86.2
160	73.7	75.0	76.1	77.4	78.9	81.0	82.6	85.2	88.3	85.7	86.4
200	74.1	75.7	77.2	78.4	79.9	81.1	83.2	85.3	87.0	88.5	85.3
250	74.0	76.1	77.1	78.2	79.7	81.4	83.2	85.1	86.2	87.5	84.5
315	73.3	75.0	76.3	77.8	79.5	81.2	83.3	84.6	84.6	84.8	87.1
400	72.4	74.7	76.0	77.8	79.4	83.4	83.4	84.4	83.8	83.1	80.4
500	77.4	74.3	76.1	77.7	79.2	81.4	83.3	83.9	82.5	81.5	79.6
630	72.2	74.3	75.7	77.5	79.6	81.6	83.3	83.4	81.6	80.0	76.3
800	71.9	73.5	75.6	77.1	79.1	81.2	82.5	82.2	80.1	79.0	73.6
1000	71.6	73.6	74.7	76.4	78.9	80.0	82.0	81.1	79.1	77.4	71.1
1250	69.5	72.5	74.3	76.4	78.4	80.6	81.3	80.2	77.9	76.6	68.7
1600	68.1	71.2	73.4	75.4	77.7	79.0	79.9	78.7	76.3	73.8	65.4
2000	67.0	70.0	72.6	74.6	77.6	78.7	78.9	77.3	74.4	71.3	61.5
2500	65.3	68.2	70.6	73.1	75.6	77.3	77.0	75.3	72.1	67.9	56.5
3150	62.8	65.0	68.2	70.8	73.1	74.3	73.9	72.1	66.4	63.0	49.6
4000	58.7	62.0	65.9	68.3	70.4	71.3	70.8	67.8	64.2	57.3	41.4
5000	56.1	60.4	64.0	66.3	69.2	69.4	68.6	65.5	60.8	53.0	37.0
6300	51.8	56.1	59.8	62.4	65.0	65.5	64.1	60.5	55.0	46.0	26.7
8000	46.2	50.8	54.7	58.6	60.0	59.9	58.4	54.5	48.6	37.8	15.7
10000	36.3	41.1	45.7	48.4	50.6	50.2	48.2	43.4	34.9	21.8	0.0
OASPL	84.3	86.4	87.5	89.2	90.9	92.7	94.1	95.3	96.9	98.0	95.6
PNL	91.5	94.1	96.2	98.3	100.5	102.6	102.6	102.1	101.5	101.7	98.0

400. SIDELINE

PNL	104.5	106.9	109.0	111.1	113.3	115.6	115.6	115.3	114.3	113.4	109.7

2000. SIDELINE

PNL	84.3	87.6	89.2	91.7	93.7	94.8	95.4	95.5	95.3	94.9	90.4

4000. SIDELINE

PNL	74.5	77.1	78.9	80.6	82.5	84.1	85.4	85.0	86.1	85.0	86.7

6000. SIDELINE

PNL	68.3	70.9	72.6	74.5	76.2	77.8	79.0	79.0	80.2	79.4	76.2

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Severe Cutback Non-Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 6A; Condition 6308

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 070530 TEST DATE 12/01/76 SCALE RATIO 7.0/1 RUN NUMBER 20663 CONDITION 6308

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		2.07	1.96		2.07	1.96	THRUST,IDL	LB			N		
TEMP	(R)	1571.6	692.0	(K)	872.8	384.5	THRUST,MEA	LB	0.0		N	0.0	
RHO	LB/FT3	0.031	0.070	KG/M3	0.489	1.117	AREA (NOD)	SQFT			SQM		
VEL	FPS	1892.8	1267.4	M/S	576.9	386.6	W (ROOT)	LB/S	3.2	3.2	KG/S	1.4	1.

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.00 FT RADIUS RAW CORRECTED SPL - (NCLEC)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	[illegible]
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.100	83.2	85.4	87.7	88.1	88.9	90.2	92.4	95.0	95.3	99.3	104.6	[illegible]
.125	86.4	88.1	88.1	88.7	90.7	92.4	92.7	95.3	97.7	101.1	105.6	[illegible]
.160	88.3	90.4	88.7	89.0	88.9	90.5	93.4	95.6	98.4	102.0	106.4	[illegible]
.200	86.9	87.3	89.5	90.5	91.9	93.6	96.5	97.7	102.0	107.6	109.6	[illegible]
.250	88.1	88.8	90.6	91.8	93.0	94.6	97.6	99.7	106.4	108.8	111.3	[illegible]
.315	90.0	90.5	92.2	93.2	94.3	96.6	99.7	100.3	107.6	111.1	114.7	[illegible]
.400	93.1	93.7	95.0	96.2	97.8	99.7	102.4	103.9	110.6	114.9	117.4	[illegible]
.500	95.7	95.4	95.0	96.8	97.9	100.3	103.6	106.9	112.9	117.3	116.6	[illegible]
.630	97.9	96.9	98.1	99.1	100.1	102.1	105.3	106.8	114.5	118.4	117.2	[illegible]
.800	97.3	98.2	97.9	100.2	101.1	102.7	105.2	107.5	115.7	119.3	118.0	[illegible]
1.00	98.2	98.6	99.3	100.5	102.2	104.9	107.4	108.5	115.9	119.5	118.0	[illegible]
1.25	98.6	99.4	100.5	101.5	103.1	104.9	106.6	108.7	115.4	118.6	118.2	[illegible]
1.60	99.3	100.4	100.9	101.7	103.2	105.6	108.9	109.2	114.3	118.6	118.5	[illegible]
2.00	99.2	99.7	100.6	101.5	103.4	105.6	108.7	110.7	113.1	117.0	117.9	[illegible]
2.50	98.6	99.3	100.8	102.1	104.6	107.2	109.6	110.3	113.0	116.6	118.4	[illegible]
3.15	98.8	99.1	101.6	102.1	103.5	106.6	109.9	110.2	112.1	115.7	116.1	[illegible]
4.00	98.4	99.0	100.4	101.7	103.9	106.6	109.7	110.2	111.4	114.6	116.3	[illegible]
5.00	98.7	98.7	100.5	102.6	104.5	107.7	109.6	110.8	111.0	114.7	116.6	[illegible]
6.30	98.2	98.6	100.6	102.2	104.2	107.0	109.5	110.3	110.8	113.4	115.7	[illegible]
8.00	97.2	98.4	101.0	102.6	104.6	108.0	109.2	110.2	111.1	113.9	115.6	[illegible]
10.0	98.6	98.6	100.7	102.2	104.5	107.6	108.6	110.6	110.8	112.6	114.1	[illegible]
12.5	96.7	97.6	101.0	102.5	104.5	107.5	108.7	110.1	110.4	112.0	114.4	[illegible]
16.0	96.7	97.0	100.5	102.4	104.4	107.2	108.1	110.6	109.9	111.4	115.3	[illegible]
20.0	95.1	95.7	99.0	101.5	103.3	106.1	106.7	109.9	108.7	110.3	115.2	[illegible]
25.0	94.4	95.2	99.1	101.1	102.5	105.1	106.0	109.6	107.9	109.2	114.0	[illegible]
31.5	92.8	93.5	98.5	99.9	102.1	104.0	105.4	108.8	106.1	107.8	114.2	[illegible]
40.0	91.5	91.6	97.6	98.7	100.5	102.7	104.7	108.5	105.0	107.6	113.8	[illegible]
50.0	90.3	89.9	95.8	96.4	98.9	100.9	103.6	107.6	105.9	106.6	112.9	[illegible]
63.0	88.5	87.7	92.9	95.2	96.5	98.1	101.5	105.0	102.3	105.6	111.3	[illegible]
80.0	85.9	85.6	90.1	91.7	93.3	95.9	98.4	103.5	106.2	102.9	108.5	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	110.7	111.3	113.3	114.7	116.5	119.2	121.3	122.9	125.0	129.2	130.4	

OAPWL = 144.6

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 070530 TEST DATE 12/01/76 SCALE RATIO 7.0/1 RUN NUMBER 20663 CONDITION 6308

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	154.8	158.3	KG/S	70..	71.8
P.R.		2.07	1.96		2.07	1.96	THRUST,IDL	LB			N		
TEMP	(R)	1571.6	692.6	(K)	872.8	384.8	THRUST,MEA	LB	0.0		N	0.0	
RHO	LB/FT3	0.031	0.070	KG/M3	0.489	1.117	AREA (NOD)	SQFT			SQM		
VEL	FPS	1892.8	1267.4	M/S	576.9	386.6	W (ROOT)	LB/S	3.2	3.2	KG/S	1.4	1.5

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	68.3	68.7	70.6	71.4	73.1	74.8	77.2	76.9	81.6	83.7	83.4
63	76.6	71.9	73.6	74.9	76.4	77.9	79.9	79.9	85.4	87.5	86.6
80	73.2	73.6	74.4	75.5	76.5	78.3	80.3	81.3	87.7	84.4	85.8
100	75.2	75.6	76.6	77.7	78.6	80.7	82.6	83.6	89.1	90.8	86.0
125	74.6	76.[illegible]	76.4	78.8	79.6	80.8	82.5	83.7	90.3	91.7	86.8
160	75.4	76.5	77.7	79.0	80.6	82.8	84.6	84.6	90.4	91.6	87.3
200	75.8	77.3	78.4	80.6	81.5	82.8	83.2	84.8	89.9	90.7	84.7
250	76.4	78.2	79.2	80.1	81.5	83.4	85.4	85.1	88.6	90.5	86.7
315	76.0	77.3	78.6	79.7	80.4	83.2	85.3	86.3	87.6	88.4	83.6
400	75.3	76.8	78.7	80.7	81.4	84.7	86.3	85.8	86.8	87.8	85.5
500	75.2	76.3	78.7	80.0	81.2	83.8	86.3	85.4	85.5	86.6	84.6
630	74.8	76.8	77.9	79.3	81.4	83.6	85.0	85.1	84.5	84.9	82.1
800	74.5	75.3	77.6	79.3	81.6	84.1	85.4	85.3	84.3	84.3	81.3
1000	73.3	74.8	77.3	79.6	80.9	83.2	[illegible]	84.2	82.6	82.1	79.1
1250	77.0	74.1	77.2	79.0	80.8	83.7	84.0	83.3	82.2	81.3	77.6
1600	76.5	72.9	76.2	77.9	80.6	82.3	82.9	82.3	80.7	78.6	73.8
2000	69.7	71.7	75.7	77.4	79.2	81.6	81.7	81.4	79.1	76.6	71.7
2500	68.5	70.6	74.2	76.3	78.1	80.2	79.9	79.9	78.9	73.8	69.3
3150	65.4	67.4	72.2	74.2	75.7	77.8	77.0	78.1	73.6	69.9	64.9
4000	62.7	65.6	69.8	72.1	73.2	74.9	74.3	75.9	70.6	65.6	58.9
5000	60.3	62.7	68.6	70.3	72.2	73.2	72.9	73.7	66.9	61.9	55.4
6300	58.6	58.6	65.5	67.1	68.6	69.7	69.0	70.9	62.7	56.1	47.1
8000	52.5	54.3	61.4	62.4	64.5	65.3	65.8	66.6	58.7	49.7	37.1
10000	43.9	46.1	52.9	55.7	58.5	56.5	58.9	58.5	45.3	35.6	15.4
OASPL	86.6	87.9	89.8	91.3	92.9	95.1	96.6	96.5	99.2	100.6	96.9
PNL	96.4	98.8	99.4	101.2	102.9	105.6	105.5	105.8	106.7	106.9	10[illegible].3

400. SIDELINE

PNL	107.5	108.9	112.4	114.1	115.8	118.0	118.8	119.5	118.4	118.0	116.1

2000. SIDELINE

PNL	87.6	89.8	92.1	93.6	95.5	97.5	96.2	97.8	98.2	98.3	93.9

4000. SIDELINE

PNL	77..	79.6	81.5	83.1	84.8	86.9	86.1	87.3	89.8	88.8	84.4

6000. SIDELINE

PNL	70.9	72.9	75.2	76.8	78.4	80.5	81.7	80.8	82.9	82.7	76.5

Measured model and scaied data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Severe Cutback Non-Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 6A; Condition 6309

a.) Model Data Measured At 15 Ft. Radius

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL (MODEL)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PEAK
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.100	87.8	85.9	87.9	88.5	88.7	89.3	90.8	93.4	95.0	98.7	103.1	[illegible]
.125	84.4	88.7	87.9	[illegible]	90.9	92.1	90.4	93.6	97.4	101.0	104.6	[illegible]
.160	88.6	90.9	89.1	89.5	88.6	89.2	91.1	92.9	98.0	102.0	106.7	[illegible]
.200	88.9	87.0	89.5	90.9	92.2	93.1	95.0	97.0	102.5	107.4	109.9	[illegible]
.250	88.3	89.4	90.7	92.3	92.9	94.2	96.3	99.4	104.7	109.5	111.9	[illegible]
.315	90.0	90.9	92.6	93.5	94.4	96.4	98.8	102.8	107.3	111.7	115.7	[illegible]
.400	93.2	94.2	95.3	96.6	98.1	99.6	102.1	106.2	111.4	115.6	118.9	[illegible]
.500	96.0	95.9	96.2	97.3	98.3	100.4	102.7	107.1	113.8	116.1	117.7	[illegible]
.630	96.3	97.5	98.5	99.6	100.4	102.8	105.2	110.6	115.4	119.1	118.2	[illegible]
.800	97.7	98.7	98.4	100.6	101.4	102.6	105.2	110.4	116.7	120.1	119.4	[illegible]
1.00	98.7	99.3	99.9	101.2	102.6	105.1	107.8	112.6	117.2	120.6	120.2	[illegible]
1.25	99.2	100.1	101.1	102.1	103.7	105.2	108.3	111.4	116.8	119.8	119.1	[illegible]
1.60	99.7	101.2	101.6	102.4	103.9	106.6	108.5	112.6	115.7	120.6	119.7	[illegible]
2.00	99.7	100.4	101.1	102.3	103.9	105.9	108.9	111.7	114.4	118.7	118.5	[illegible]
2.50	98.8	100.0	100.8	102.2	103.9	106.2	109.4	111.7	113.5	117.7	117.6	[illegible]
3.15	98.9	99.9	100.8	102.2	103.9	106.4	109.5	111.4	112.9	116.7	116.7	[illegible]
4.00	98.6	99.7	100.8	102.3	104.2	106.9	109.7	111.1	112.3	116.6	114.4	[illegible]
5.00	98.9	99.4	100.4	102.3	104.3	107.1	109.4	110.4	111.9	115.0	112.0	[illegible]
6.30	98.5	99.4	100.5	102.4	104.4	107.1	109.3	110.1	111.6	114.1	111.3	[illegible]
8.00	97.4	99.4	100.7	102.5	104.6	107.4	109.3	109.9	111.4	113.1	110.2	[illegible]
10.0	98.8	98.9	100.5	102.3	104.5	107.8	108.8	109.7	110.9	112.3	109.3	[illegible]
12.5	98.6	98.2	100.4	102.1	104.5	107.1	108.6	108.7	109.9	110.9	107.7	[illegible]
16.0	98.1	97.8	99.7	102.6	104.3	108.6	107.9	108.2	109.2	109.9	106.2	[illegible]
20.0	98.2	96.4	98.5	100.9	103.2	105.3	106.3	106.5	107.5	108.0	103.8	[illegible]
25.0	93.2	95.0	97.9	100.2	102.3	104.1	105.3	104.8	106.2	106.4	102.1	[illegible]
31.5	91.5	93.9	96.0	98.8	[illegible]	102.8	104.0	103.7	104.2	104.6	100.1	[illegible]
40.0	89.3	91.6	94.7	96.8	[illegible]	101.0	101.9	101.9	102.1	102.7	97.4	[illegible]
50.0	86.7	89.0	92.0	93.7	97.0	98.2	99.1	99.6	99.5	100.1	95.7	[illegible]
63.0	83.7	85.7	88.5	90.9	93.4	94.6	95.9	97.1	96.5	97.5	93.5	[illegible]
80.0	79.7	81.8	[illegible]	[illegible]	89.7	91.6	92.5	94.7	93.5	94.6	90.0	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
OASPL	110.0	111.9	113.1	114.7	116.5	118.8	121.0	123.1	126.5	129.9	129.6	

OAPWL = [illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 670530 TEST DATE 17/01/76 SCALE RATIO 7.0/1 RUN NUMBER 20063 CONDITION 6309

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT	2.13	1.99	SQM	2.13	1.99	MASS FLOW	LB/S	159.7	157.3	KG/S	72.5	71.3
P.R.							THRUST,IDL	LB			N		
TEMP	(R)	1605.0	690.0	(K)	891.7	387.0	THRUST,MEA	LB		0.0	N		0.0
RHO	LB/FT3	0.030	0.069	KG/M3	0.482	1.113	AREA (MOD)	SQFT			SQM		
VEL	FPS	1946.7	1226.3	M/S	593.3	373.8	W (MODEL)	LB/S	3.3	3.2	KG/S	1.5	1.5

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	68.3	69.1	71.0	72.2	73.6	74.6	76.3	79.2	82.1	84.3	84.9
63	70.7	72.4	73.9	75.3	76.7	77.8	79.6	82.6	86.2	88.2	88.1
80	73.5	74.1	74.8	76.6	[illegible]	78.8	80.7	83.5	88.6	90.7	86.9
100	75.6	75.6	77.0	78.2	78.9	80.2	82.5	86.2	90.0	91.5	87.6
125	75.0	76.8	76.9	79.2	79.9	80.7	82.5	86.8	91.3	92.5	88.2
160	75.9	77.2	78.3	79.7	81.0	81.0	85.0	88.1	91.7	97.7	88.7
200	76.4	78.6	79.5	80.6	82.1	83.1	85.5	88.0	91.3	91.9	87.6
250	76.8	79.0	79.9	80.8	82.2	83.8	85.6	87.9	90.0	91.9	87.9
315	76.5	78.6	79.1	80.5	81.9	83.5	85.7	87.5	88.5	90.1	86.6
400	75.5	77.5	78.7	80.3	81.8	83.7	86.1	87.2	87.3	88.9	84.7
500	75.3	77.1	78.5	80.1	81.6	83.6	85.7	86.6	86.3	87.5	83.2
630	74.8	76.7	78.3	79.9	81.7	83.5	85.9	86.0	85.4	84.3	80.2
800	74.7	76.6	77.5	79.6	81.4	83.7	85.2	84.9	84.4	84.6	77.5
1000	73.9	75.6	77.2	79.2	81.1	[illegible]	84.6	84.0	83.4	82.0	74.7
1250	72.2	75.1	76.9	78.9	80.8	83.1	84.1	83.7	87.5	80.9	72.7
1600	70.7	73.8	76.0	78.0	80.8	82.0	82.7	81.5	80.8	78.3	69.6
2000	69.6	72.3	75.1	77.2	79.2	81.2	81.6	80.0	78.6	75.5	65.0
2500	67.9	70.8	73.6	75.9	78.6	79.8	79.7	78.1	76.2	72.3	60.2
3150	64.5	68.1	70.9	73.6	75.6	77.6	76.6	74.7	72.4	67.6	53.5
4000	61.5	65.6	68.6	71.2	73.0	[illegible]	73.6	70.7	68.3	62.2	46.2
5000	59.6	63.1	66.9	69.2	71.9	72.0	71.4	68.6	65.6	56.7	41.3
6300	54.4	58.6	62.8	65.2	67.7	68.8	67.0	63.9	59.3	51.8	36.9
8000	48.9	53.4	57.6	[illegible]	62.6	62.8	61.3	58.2	52.3	43.2	19.9
10000	39.1	44.1	48.5	51.4	53.4	53.6	51.3	47.8	34.5	22.5	0.0
OASPL	84.9	86.6	90.0	91.6	93.1	94.9	96.6	98.0	100.7	101.4	97.5
PNL	94.2	96.7	98.9	101.6	102.9	104.5	105.7	104.9	105.3	105.5	100.1

400. SIDELINE PNL	107.1	109.5	111.6	113.7	115.7	117.4	118.3	116.1	118.1	117.7	112.5
2000. SIDELINE PNL	87.1	89.4	91.8	93.7	95.5	97.2	98.6	98.3	99.0	99.2	93.6
4000. SIDELINE PNL	77.4	79.8	81.5	83.3	84.9	86.5	88.6	88.6	89.8	89.6	83.9
6000. SIDELINE PNL	71.7	73.7	75.7	77.0	78.5	80.1	81.8	82.5	84.0	83.0	77.2

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Severe Cutback Non-Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 6A; Condition 6310

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 670530 TEST DATE 12/01/76 SCALE RATIO 7.0/1 RUN NUMBER 2606 CONDITION 6310

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		2.14	2.00		2.14	2.00	THRUST,IDL	LB			N		
TEMP	(R)	1610.0	640.0	(K)	898.9	357.0	THRUST,MEA	LB		0.0	N		0.0
RHO	LB/FT3	0.030	0.070	KG/M3	0.479	1.113	AREA (MOD)	SQFT			SQM		
VEL	FPS	1961.7	1227.0	M/S	597.9	374.2	W (MODEL)	LB/S	3.3	3.2	KG/S	1.5	1.5

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS RAW CORRECTED SPL - (MODEL)

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PLACE 40-170
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	82.0	85.0	87.0	88.5	88.0	89.2	90.5	90.3	94.6	98.7	103.6	[illegible]
.125	84.9	89.0	88.1	89.4	91.2	92.3	90.5	95.2	97.7	101.5	104.9	[illegible]
.160	86.6	91.0	89.1	89.7	88.0	89.6	91.6	94.6	98.3	103.0	106.6	[illegible]
.200	86.9	87.0	89.7	91.0	92.2	93.2	95.3	98.2	102.4	107.6	110.5	[illegible]
.250	88.3	89.4	90.7	92.5	93.2	94.6	96.4	100.5	104.9	109.7	112.1	[illegible]
.315	91.1	90.9	92.4	93.6	94.5	96.5	96.7	103.6	107.5	111.9	115.6	[illegible]
.400	91.3	94.2	95.1	96.6	96.0	99.6	102.2	106.9	111.7	115.7	118.9	[illegible]
.500	96.2	95.9	96.3	97.4	98.3	100.6	102.9	107.8	114.1	118.3	117.9	[illegible]
.630	98.2	97.5	98.7	99.0	100.6	102.3	105.3	110.4	115.6	119.4	118.3	[illegible]
.800	97.6	98.9	98.5	100.6	101.5	102.7	105.4	111.0	116.9	120.4	119.5	[illegible]
1.00	98.8	99.5	100.1	101.3	102.8	103.3	107.8	112.3	117.4	120.8	120.3	[illegible]
1.25	99.2	100.1	101.2	102.3	103.8	105.4	108.5	112.6	117.6	120.6	119.3	[illegible]
1.60	99.9	101.1	101.7	102.5	104.1	106.3	108.9	112.6	116.0	120.4	119.6	[illegible]
2.00	100.6	100.4	101.3	102.5	104.6	106.1	109.1	112.5	114.6	119.1	118.8	[illegible]
2.50	99.0	100.3	100.9	102.5	104.6	106.4	109.5	112.5	113.8	118.1	117.9	[illegible]
3.15	99.2	100.1	101.0	102.4	104.6	106.7	109.7	112.4	113.2	117.0	116.9	[illegible]
4.00	98.9	100.6	101.0	102.4	104.5	107.2	109.9	112.2	112.7	116.5	114.8	[illegible]
5.00	99.0	99.4	100.7	102.5	104.4	107.3	109.7	111.6	112.1	115.4	113.2	[illegible]
6.30	98.1	99.6	100.1	102.5	104.7	107.4	109.8	111.2	112.0	114.3	111.7	[illegible]
8.00	97.5	99.3	100.8	102.7	104.9	107.6	109.5	110.9	111.6	113.4	110.6	[illegible]
10.0	97.1	99.1	100.8	102.7	104.9	107.5	109.1	110.3	111.4	112.4	109.3	[illegible]
12.5	96.8	98.4	100.7	102.5	104.9	107.2	108.6	110.1	110.4	111.2	108.4	[illegible]
16.0	96.3	98.0	100.6	102.2	104.7	106.8	108.1	109.7	109.5	110.1	106.5	[illegible]
20.0	94.5	96.7	98.9	101.1	103.5	105.7	106.6	108.3	108.0	108.2	104.6	[illegible]
25.0	93.3	95.0	98.2	100.3	102.6	104.6	105.5	106.9	106.6	106.6	102.9	[illegible]
31.5	91.7	94.6	97.6	99.6	102.1	103.0	104.2	106.6	104.5	104.8	101.1	[illegible]
40.0	89.7	91.9	95.1	97.1	100.0	101.2	102.2	104.5	102.6	103.0	98.7	[illegible]
50.0	87.2	89.3	92.3	94.0	97.2	98.6	99.3	102.8	100.0	100.4	96.8	[illegible]
63.0	84.1	85.9	88.9	91.2	93.7	94.8	96.3	101.0	97.0	97.8	94.3	[illegible]
80.0	80.6	87.3	85.5	87.2	90.0	92.0	93.0	99.5	94.2	95.0	92.1	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	111.0	112.8	113.3	114.9	116.8	119.6	121.2	124.1	126.7	130.2	129.8	

OAPWL = 145.2

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 670530 TEST DATE 12/01/76 SCALE RATIO 7.0/1 RUN NUMBER 2606 CONDITION 6310

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	166.2	156.0	KG/S	72.7	71.1
P.R.		2.14	2.00		2.14	2.00	THRUST,IDL	LB			N		
TEMP	(R)	1610.0	640.0	(K)	898.9	357.0	THRUST,MEA	LB		0.0	N		0.0
RHO	LB/FT3	0.030	0.070	KG/M3	0.479	1.113	AREA (MOD)	SQFT			SQM		
VEL	FPS	1961.7	1227.0	M/S	597.9	374.2	W (MODEL)	LB/S	3.3	3.2	KG/S	1.5	1.5

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	68.6	69.1	71.0	73.3	73.1	74.7	76.2	80.8	82.3	84.5	85.0
63	70.8	72.4	73.7	75.3	76.6	78.0	79.7	83.3	86.5	88.3	88.1
80	73.7	74.1	74.9	76.1	76.9	78.8	80.4	84.2	88.9	90.9	87.1
100	75.5	75.6	77.2	78.4	79.1	[illegible]	82.6	86.6	90.2	91.8	87.1
125	74.9	77.0	77.6	79.4	80.6	[illegible]	82.7	87.2	91.5	92.8	88.3
160	76.0	77.4	78.5	79.8	81.2	83.2	84.8	88.4	91.9	92.9	88.8
200	76.6	78.0	79.6	80.8	82.2	83.3	85.7	88.7	91.5	92.1	87.8
250	77.0	78.9	80.0	80.9	82.4	84.1	86.6	88.5	90.3	92.3	88.6
315	76.8	78.0	79.3	80.7	82.0	83.7	85.9	88.1	88.5	90.5	86.3
400	75.7	77.8	78.8	80.6	81.9	83.9	86.2	88.0	87.6	89.3	85.8
500	75.6	77.3	78.7	80.3	81.7	83.9	86.1	87.6	86.6	87.8	83.4
630	75.1	77.0	78.5	80.0	82.0	84.2	86.1	87.1	85.8	86.8	80.6
800	74.8	76.7	77.8	79.8	81.5	83.9	85.5	86.1	84.6	85.0	77.9
1000	74.0	75.8	77.4	79.3	81.4	83.6	84.9	85.1	83.8	83.0	75.1
1250	72.3	75.2	77.0	79.1	81.1	83.3	84.3	84.2	82.1	81.2	72.6
1600	71.6	74.6	76.3	78.4	80.4	82.4	83.0	82.6	81.3	78.6	69.4
2000	69.8	72.5	75.4	77.4	79.6	81.3	81.8	81.4	79.1	75.8	65.7
2500	68.1	71.0	73.7	76.1	78.4	79.8	79.9	79.6	76.5	72.3	60.9
3150	64.8	68.4	71.3	73.8	75.9	77.4	76.9	76.5	72.9	67.8	54.5
4000	61.6	65.7	68.9	71.3	73.3	74.2	73.8	72.8	66.7	62.4	47.6
5000	58.2	63.2	67.1	69.4	72.2	72.2	71.7	70.9	65.3	58.9	42.3
6300	54.8	58.9	63.2	65.5	68.1	68.2	67.3	66.5	59.8	52.1	32.2
8000	49.4	53.7	57.9	60.0	62.8	63.6	61.5	61.4	52.8	43.5	21.0
10000	39.5	44.3	48.9	51.7	53.7	53.2	51.7	51.7	44.6	27.8	0.0
OASPL	87.0	88.7	90.1	91.8	93.3	95.1	96.8	98.8	100.4	101.7	97.7
PNL	94.3	96.9	99.1	101.2	103.2	104.7	105.4	106.2	105.6	105.8	100.3

400. SIDELINE

PNL	107.3	109.7	111.9	113.9	116.6	117.6	118.5	119.5	118.4	118.6	112.8

2000. SIDELINE

PNL	87.5	89.7	92.0	93.9	95.6	97.4	98.2	99.2	99.2	99.5	93.6

4000. SIDELINE

PNL	77.8	80.0	81.7	83.5	85.0	86.7	88.2	89.5	90.0	90.2	84.0

6000. SIDELINE

PNL	71.4	73.8	75.4	77.3	78.7	80.3	81.8	83.2	84.3	84.7	77.4

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Cutback Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 5A; Condition 6501

a.) Model Data Measured At 15 Ft. Radius

STAND A206 RIG ID 705307 TEST DATE 12/03/76 SCALE RATIO 7.0/1 RUN NUMBER 20065 CONDITION 6501

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		1.33	1.36		1.33	1.36	THRUST,IDL LB			N		
TEMP	(R)	1271.0	603.0	(K)	706.1	335.0	THRUST,MEA LB		0.0	N		0.0
RHO	LB/FT3	0.036	0.072	KG/M3	0.561	1.159	AREA (MOD) SQFT			SQM		
VEL	FPS	1066.8	781.5	M/S	325.2	238.2	W (MODEL) LB/S	1.7	[illegible]	KG/S	0.8	[illegible]

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS RAW CORRECTED SPL - (NLNLL)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PLDB 6L-170
	MICROPHONE ANGLES IN DEGREES											
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	68.9	71.9	75.0	75.4	75.6	75.8	78.0	80.8	82.0	85.4	89.8	100.2
.125	71.3	75.9	76.6	75.4	76.6	77.6	77.6	80.5	84.3	87.1	89.8	103.3
.160	73.3	75.7	76.9	75.7	75.4	75.9	77.8	79.6	84.0	88.5	91.9	107.8
.200	72.6	73.6	76.0	77.0	78.1	79.2	81.3	83.2	87.6	91.9	94.6	108.8
.250	74.1	76.1	77.1	78.6	79.3	80.4	82.5	85.5	89.3	93.7	95.2	109.9
.315	77.6	77.6	78.8	79.8	80.4	82.3	84.6	88.0	91.3	95.1	98.3	110.9
.400	79.3	79.9	82.0	83.0	84.1	85.6	87.5	90.2	93.9	97.8	101.2	111.6
.500	80.8	80.6	81.6	82.8	83.0	85.5	87.4	90.5	94.0	98.2	99.6	111.8
.630	81.0	81.4	83.4	83.0	85.2	86.7	89.2	92.1	94.5	97.7	97.7	113.6
.800	81.1	81.9	82.8	84.2	85.0	86.8	88.9	91.6	94.7	96.0	96.0	112.7
1.00	81.4	81.8	83.3	84.8	85.9	87.6	89.9	92.4	94.4	95.6	93.8	112.6
1.25	81.4	81.9	83.6	84.5	86.2	87.7	90.0	92.4	93.9	93.6	90.3	111.7
1.60	81.6	82.2	84.0	84.8	86.2	87.9	90.1	92.0	93.0	92.4	88.7	111.5
2.00	81.2	82.5	84.2	85.2	86.7	88.3	90.4	92.1	92.1	90.6	86.7	111.1
2.50	81.7	83.4	84.0	85.7	87.3	88.7	90.7	91.9	91.8	89.6	86.6	111.1
3.15	82.2	83.2	85.1	86.0	87.3	89.0	90.8	91.6	90.8	86.4	85.4	110.9
4.00	83.1	83.5	85.2	86.3	87.7	89.2	91.0	91.3	90.3	88.0	84.4	110.9
5.00	83.1	83.1	84.8	86.0	87.6	89.1	90.6	90.7	89.6	87.6	83.2	110.5
6.30	82.6	83.0	84.7	85.9	87.7	88.9	90.5	90.2	88.9	86.4	82.1	110.2
8.00	81.3	82.5	84.6	85.7	87.3	88.8	90.2	89.8	88.0	85.4	81.2	109.0
10.0	81.0	82.1	84.0	85.1	86.7	88.2	89.5	88.8	87.0	84.2	80.1	109.1
12.5	80.6	81.4	83.7	84.7	86.4	87.7	88.9	87.8	85.7	82.7	78.1	108.6
16.0	80.2	80.5	82.5	83.9	85.7	86.9	88.1	86.8	84.3	81.1	76.1	107.5
20.0	78.1	79.6	81.0	82.2	83.9	85.3	85.9	84.7	82.1	78.7	73.2	105.6
25.0	76.7	78.0	80.1	81.3	82.9	83.6	84.4	82.4	80.5	76.6	71.2	104.2
31.5	74.8	75.8	78.3	79.5	81.9	82.2	82.6	80.7	78.0	74.5	69.4	102.5
40.0	72.8	73.8	76.3	77.3	79.3	80.1	80.1	78.1	75.3	72.1	67.7	100.2
50.0	70.0	70.9	73.4	74.2	76.8	76.9	76.7	75.4	72.6	69.4	67.6	97.2
63.0	66.6	67.4	70.0	71.1	72.7	73.0	73.3	72.0	69.2	67.3	67.3	93.7
80.0	62.3	63.3	66.0	66.6	68.6	69.3	69.2	68.9	66.1	64.6	66.1	89.9
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	94.6	95.1	96.0	97.9	99.4	100.8	102.5	103.7	104.9	106.5	107.3	

OAPWL = 120.3

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND A206 RIG ID 705307 TEST DATE 12/03/76 SCALE RATIO 7.0/1 RUN NUMBER 20065 CONDITION 6501

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S	83.3	117.6	KG/S	37.8	53.3
P.R.		1.33	1.36		1.33	1.36	THRUST,IDL LB			N		
TEMP	(R)	1271.0	603.0	(K)	706.1	335.0	THRUST,MEA LB		0.0	N		0.0
RHO	LB/FT3	0.036	0.072	KG/M3	0.561	1.159	AREA (MOD) SQFT			SQM		
VEL	FPS	1066.8	781.5	M/S	325.2	238.2	W (MODEL) LB/S	1.7	2.4	KG/S	0.8	1.1

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
	ANGLE IN DEGREES										
50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
63	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
80	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
100	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
125	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
160	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
200	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
315	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
400	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
630	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
800	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1600	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3150	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6300	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OASPL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PNL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	400. SIDELINE										
PNL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	2000. SIDELINE										
PNL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	4000. SIDELINE										
PNL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	6000. SIDELINE										
PNL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Cutback Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 5A; Condition 6502

a.) Model Data Measured At 15 Ft. Radius

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	72.0	75.3	77.4	78.5	79.0	79.4	81.1	83.7	85.3	88.7	93.6
.125	74.0	79.3	79.4	78.8	80.1	81.3	80.7	83.7	87.6	91.2	93.8
.160	74.7	79.2	78.5	79.0	78.6	79.5	81.2	83.3	87.8	92.3	95.5
.200	76.0	77.0	79.7	80.4	81.9	82.8	84.9	87.0	91.4	96.3	98.6
.250	77.3	79.0	80.6	81.4	82.8	83.9	85.4	89.1	93.1	98.0	99.9
.315	80.6	81.0	82.3	83.2	84.3	85.4	88.5	91.9	93.7	99.4	103.6
.400	82.7	83.0	85.8	86.7	87.9	89.4	91.6	94.5	98.7	103.1	106.5
.500	84.7	84.9	85.7	86.6	87.6	89.5	91.8	95.3	100.6	104.3	105.0
.630	86.0	86.1	87.5	88.2	89.0	90.7	93.5	96.7	99.9	104.1	104.5
.800	85.4	86.1	86.8	88.3	89.4	90.9	93.1	96.3	100.1	103.3	103.9
1.00	85.3	85.6	87.1	88.0	90.1	91.9	94.4	97.6	99.6	101.4	100.7
1.25	85.1	85.8	87.6	88.6	90.2	92.6	94.6	97.3	99.1	99.2	98.0
1.60	85.2	86.7	87.9	88.7	90.4	92.3	94.7	97.0	98.3	97.9	96.8
2.00	85.0	86.3	87.6	89.2	90.9	92.6	95.0	96.9	97.1	95.9	92.3
2.50	85.4	86.0	88.4	89.7	91.3	93.6	95.3	96.8	96.6	94.6	91.0
3.15	85.9	87.6	88.7	89.9	91.5	93.1	95.4	96.3	95.5	93.3	90.2
4.00	86.0	87.4	89.0	90.2	91.9	93.4	95.5	96.1	[illegible]	92.6	89.2
5.00	86.8	87.1	88.6	90.1	91.8	93.4	95.2	95.6	[illegible]	91.8	88.0
6.30	86.5	86.9	88.8	90.2	92.1	93.4	95.2	[illegible]	93.9	91.5	87.6
8.00	85.1	86.7	88.8	90.1	91.9	93.3	94.8	94.0	93.2	90.9	86.9
10.0	85.6	86.5	88.3	89.7	91.6	92.9	94.4	93.9	92.5	90.2	86.5
12.5	84.6	85.8	88.2	89.1	91.3	92.6	93.7	93.0	91.3	89.0	84.7
16.0	84.0	85.6	87.2	88.6	90.8	91.9	93.1	92.2	90.1	87.6	84.1
20.0	82.3	83.8	85.7	87.2	89.3	90.6	91.3	90.7	88.1	85.4	84.4
25.0	80.9	82.7	85.1	86.2	88.1	88.8	89.7	87.9	86.4	83.2	78.2
31.5	78.8	80.6	83.5	84.6	87.2	87.5	88.0	86.2	83.6	80.9	76.1
40.0	76.7	78.4	81.2	82.4	84.8	85.4	85.4	83.8	81.0	78.4	73.6
50.0	73.9	75.4	78.3	79.6	81.9	82.4	82.1	80.8	77.9	75.2	72.4
63.0	76.6	71.9	74.8	75.8	77.8	78.1	78.2	77.3	74.4	72.6	71.7
80.0	66.3	67.0	70.9	71.4	73.8	74.3	74.0	74.2	70.8	69.5	70.2
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	98.2	99.1	100.9	102.1	103.8	105.2	107.1	108.5	110.6	112.1	113.1

OAPWL = 129.2

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 705307 TEST DATE 12/03/76 SCALE RATIO 7.0/1 RUN NUMBER 26665 CONDITION 6502

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		1.44	1.47		1.44	1.47
TEMP	(R)	1292.0	620.0	(K)	717.8	344.4
RHO	LB/FT3	0.036	0.072	KG/M3	0.545	1.152
VEL	FPS	1240.9	581.7	M/S	378.2	[illegible]

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	58.1	59.2	60.1	61.9	62.9	64.1	66.6	68.3	70.5	72.5	72.0
63	60.4	61.8	64.1	65.4	66.5	67.6	69.1	70.4	73.5	75.7	75.7
80	62.2	63.1	64.3	65.3	66.4	67.7	69.3	71.7	74.0	76.7	74.2
100	63.4	64.2	66.4	66.6	67.9	68.8	70.8	72.9	74.5	76.5	73.3
125	62.7	64.2	65.3	66.4	67.9	69.0	70.4	72.5	74.7	75.7	72.7
160	62.5	63.5	65.5	67.3	68.5	69.8	71.0	73.1	74.1	73.5	69.2
200	62.3	63.7	66.0	67.1	68.6	69.9	71.8	73.4	73.6	71.3	65.1
250	62.5	64.6	[illegible]	67.1	68.7	70.1	71.8	72.9	72.6	69.8	63.0
315	61.6	63.9	66.3	67.4	68.9	70.2	71.8	72.5	71.8	67.3	59.0
400	62.1	64.3	66.3	67.8	69.2	70.5	72.0	72.3	70.4	65.6	58.1
500	62.3	64.2	66.4	67.0	69.4	70.3	71.8	71.5	68.9	64.1	56.7
630	62.0	64.4	66.5	67.8	69.4	70.4	71.7	71.0	68.2	62.9	55.0
800	62.6	63.7	65.7	67.4	68.9	70.0	71.0	70.1	66.9	61.4	52.7
1000	61.8	63.1	65.3	67.6	68.6	69.6	70.3	68.9	65.7	60.2	50.8
1250	59.9	62.4	65.6	66.5	68.1	69.0	69.0	68.1	64.3	58.7	48.9
1600	58.9	61.4	63.8	65.4	67.1	67.6	68.3	66.2	62.4	56.4	46.0
2000	57.6	59.9	62.9	64.6	66.0	66.7	66.7	64.3	60.0	53.6	42.9
2500	55.6	58.0	60.9	62.5	64.3	64.9	64.9	62.1	57.1	50.0	37.1
3150	52.4	55.5	58.1	59.9	61.7	62.3	61.8	58.6	53.6	45.0	30.1
4000	49.2	52.5	55.4	57.2	58.8	58.6	58.0	55.8	48.5	39.6	22.3
5000	46.3	49.0	53.4	55.6	57.3	56.7	55.5	51.1	44.6	35.0	17.3
6300	41.8	45.6	49.3	50.8	52.9	52.4	50.5	45.8	38.2	27.5	7.1
8000	36.1	39.8	43.9	45.0	47.5	46.4	44.3	39.4	30.7	18.3	0.0
10000	28.6	30.3	34.8	38.3	37.8	36.3	33.0	28.0	17.4	7.0	0.0
OASPL	74.1	75.7	77.6	79.1	80.0	81.7	83.0	83.0	83.0	81.4	81.6
PNL	81.4	83.5	86.2	87.7	89.5	90.1	90.6	89.4	87.4	84.5	78.7
600. SIDELINE PNL	94.6	96.5	99.1	100.5	102.4	103.1	103.7	102.5	99.9	96.8	91.6
2000. SIDELINE PNL	74.1	76.4	79.1	83.3	82.2	82.9	[illegible]	82.4	80.4	77.4	72.1
4000. SIDELINE PNL	63.9	66.3	68.7	70.2	71.7	72.7	73.6	[illegible]	71.6	68.4	62.4
6000. SIDELINE PNL	57.4	59.4	62.4	64.6	65.4	66.3	67.3	67.4	65.3	62.4	56.3

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Cutback Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 5A; Condition 6503

a.) Model Data Measured At 15 Ft. Radius

STAND 3766 RIG ID 705307 TEST DATE 12/03/76 SCALE RATIO 7.0/1 RUN NUMBER [illegible] CONDITION 6503

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0 FT RADIUS

BAND CENTER FREQ	MICROPHONE ANGLES IN DEGREES
[illegible]	[illegible]

OSPL 99.4 100.3 102.1 103.4 105.0 106.6 108.7 110.1 111.8 114.3 115.0

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND 3766 RIG ID 705307 TEST DATE 12/03/76 SCALE RATIO 7.0/1 RUN NUMBER [illegible] CONDITION 6503

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		1.40	1.51		1.40	1.51
TEMP	(R)	1319.0	626.0	(K)	732.0	347.0
RHO	LB/FT3	0.034	0.072	KG/M3	0.550	1.150
VEL	FPS	1368.3	917.6	M/S	396.6	279.7

		PRIMARY	FAN		PRIMARY	FAN
MASS FLOW	LB/S	104.4	133.3	KG/S	47.3	60.5
THRUST,IDL	LB			N		
THRUST,MIX	LB		0.0	N		0.0
AREA (MOD)	SQFT			SQM		
W (MODEL)	LB/S	2.1	2.7	KG/S	1.0	1.2

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	[illegible]	60.2	62.0	63.0	64.0	65.1	67.3	69.7	72.0	74.2	74.2
63	61.6	62.8	65.3	66.6	67.5	68.0	70.3	72.2	75.6	77.3	77.3
80	63.5	64.4	65.5	66.9	68.6	69.0	70.6	73.1	76.6	76.8	76.0
100	65.4	65.7	67.5	68.3	69.1	70.1	72.3	74.5	76.3	78.0	75.5
125	64.1	65.6	66.7	68.3	[illegible]	70.3	71.9	74.1	76.5	76.8	75.1
160	63.8	64.9	66.8	66.6	69.8	71.1	73.1	75.6	76.1	75.9	71.9
200	63.9	65.0	67.2	68.3	69.9	71.3	73.3	75.1	75.5	73.3	67.5
250	63.6	65.2	67.4	68.5	70.6	71.5	73.3	74.5	74.4	71.8	65.1
315	62.9	65.0	67.1	68.6	70.2	71.6	71.7	74.1	72.8	69.3	61.7
400	63.2	65.5	67.6	69.1	70.4	71.6	73.5	73.9	72.3	67.6	59.9
500	63.3	65.3	67.6	69.1	70.4	71.0	73.5	73.1	70.6	65.9	58.3
630	63.8	65.3	67.7	69.2	70.7	71.6	73.3	72.6	69.9	64.5	56.5
800	63.6	64.7	67.0	68.8	70.8	71.3	72.5	71.6	68.7	63.3	54.6
1000	62.9	64.6	66.7	68.3	70.0	71.6	72.6	70.6	67.4	62.6	52.9
1250	61.6	63.5	66.0	67.0	69.3	70.3	73.2	69.7	66.2	60.6	50.7
1600	59.9	[illegible]	65.6	66.7	68.3	69.5	69.9	[illegible]	64.3	58.5	48.6
2000	58.8	[illegible]	64.2	65.6	67.5	68.3	68.5	66.1	[illegible]	56.0	45.1
2500	57.1	59.2	62.2	64.2	65.9	66.5	66.6	63.9	59.3	52.4	39.2
3150	53.7	56.6	59.6	61.3	63.0	63.9	63.2	60.1	55.0	47.3	32.3
4000	50.2	53.4	56.9	58.8	60.2	66.1	59.7	55.6	50.6	41.4	24.5
5000	47.4	50.0	54.0	56.4	58.7	58.1	57.2	53.6	46.6	37.4	14.5
6300	42.9	46.3	50.5	57.1	54.2	54.0	52.3	47.7	40.3	29.1	4.6
8000	37.2	40.7	44.6	46.3	48.8	45.6	45.7	41.3	37.0	21.5	0.0
10000	26.6	[illegible]	35.7	37.5	38.0	38.	35.3	30.6	19.2	4.5	0.0
OASPL	75.3	76.9	79.0	80.5	81.9	[illegible]	84.5	85.2	85.6	80.0	83.3
PNL	92.6	94.7	87.3	[illegible]	[illegible]	91.7	92.3	91.1	89.6	88.9	81.1

400. SIDELINE

PNL	95.8	97.7	100.3	102.6	103.7	104.6	[illegible]	104.2	101.9	99.0	93.7

1000. SIDELINE

PNL	79.3	77.8	80.4	82.6	83.6	84.5	85.1	84.6	82.9	80.3	74.5

4000. SIDELINE

PNL	69.1	[illegible]	70.6	71.6	73.1	74.1	75.7	74.9	73.4	70.2	66.9

6000. SIDELINE

PNL	56.7	61.2	63.7	65.4	66.7	67.1	[illegible]	66.7	67.4	64.6	58.6

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Cutback Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 5A; Condition 6504

a.) Model Data Measured At 15 Ft. Radius

STAND 5766 RIG ID 7055C? TEST DATE 12/03/76 SCALE RATIO 7.0/1 RUN NUMBER [illegible] CONDITION 6504

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S	[illegible]	[illegible]	KG/S	[illegible]	[illegible]
P.R.		3.74	1.09		3.74	1.09	THRUST,ICL LB					
TEMP	(R)	1460.0	651.0	(K)	762.2	361.7	THRUST,MEA LB					
RHO	LB/FT3	0.033	0.073	KG/M3	0.526	1.161	AREA (MOD) SQFT		0.0	SQM		0.0
VEL	FPS	1577.4	1046.2	M/S	480.9	318.9	W (MODEL) LB/S	2.7	[illegible]	KG/S	[illegible]	[illegible]

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS; RAD CORRECTED SPL - [illegible]

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PCWIB
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.100	77.8	81.3	83.0	83.0	[illegible]	84.3	86.6	89.3	90.9	90.4	94.3	[illegible]
.125	[illegible]	84.8	84.3	84.1	85.7	85.7	86.2	88.9	92.9	90.0	94.7	[illegible]
.160	81.2	85.2	84.1	84.5	[illegible]	84.5	88.7	88.6	93.6	98.0	101.9	[illegible]
.200	81.9	82.6	85.3	83.9	87.6	88.3	90.3	92.1	97.7	102.7	105.2	[illegible]
.250	[illegible]	84.5	86.1	87.7	88.4	89.1	91.5	95.2	99.6	104.7	106.7	[illegible]
.315	86.6	86.5	88.1	85.7	89.7	91.5	94.5	98.6	102.7	107.2	110.9	[illegible]
.400	89.0	89.4	91.3	92.0	93.8	95.2	97.8	101.3	104.2	104.7	114.1	[illegible]
.500	91.2	91.5	91.9	92.8	93.9	95.5	98.3	102.6	108.3	112.7	112.7	[illegible]
.630	93.9	93.3	94.4	95.0	95.8	97.4	100.4	104.6	109.1	113.0	113.6	[illegible]
.800	92.9	93.6	93.7	93.3	96.2	97.7	100.3	104.6	104.8	114.2	114.0	[illegible]
1.00	93.3	93.3	94.5	95.6	97.1	99.3	102.4	105.5	109.4	113.9	113.8	[illegible]
1.25	93.2	93.7	93.3	96.0	97.7	99.2	102.8	105.8	108.8	111.3	112.3	[illegible]
1.60	92.7	93.6	94.9	93.7	97.5	99.4	102.4	105.5	107.4	108.1	109.4	[illegible]
2.00	91.8	93.0	94.7	95.8	97.7	99.6	102.6	105.9	106.1	106.4	106.2	[illegible]
2.50	91.8	93.2	95.0	96.2	98.0	100.0	103.2	105.8	105.5	104.7	103.9	[illegible]
3.15	92.2	93.2	95.1	96.4	96.2	100.3	103.3	104.7	104.3	102.9	102.2	[illegible]
4.00	92.6	93.6	95.3	96.7	98.9	100.7	103.4	104.3	103.6	101.9	100.2	[illegible]
5.00	92.6	93.3	95.2	96.7	96.5	100.6	[illegible]	103.8	102.6	100.9	95.9	[illegible]
6.30	92.6	93.3	95.2	96.7	98.7	100.9	102.9	103.1	101.9	100.6	98.6	[illegible]
8.00	91.6	93.3	95.3	96.0	98.7	100.6	102.6	103.0	101.6	100.1	97.6	[illegible]
10.0	91.5	93.0	95.1	96.5	98.7	100.6	102.2	102.9	101.3	100.1	97.7	[illegible]
12.5	91.3	92.6	95.0	96.4	96.6	100.1	101.8	101.8	100.6	99.7	96.5	[illegible]
16.0	90.6	92.0	94.1	95.9	98.1	99.9	101.2	101.2	100.1	98.8	[illegible]	[illegible]
20.0	89.0	90.6	93.0	96.0	96.8	98.7	99.5	99.3	98.5	96.6	92.5	[illegible]
25.0	87.7	89.5	92.1	93.4	96.0	97.6	98.3	97.6	97.2	95.1	90.2	[illegible]
31.5	85.6	87.6	90.7	92.4	95.2	96.0	96.9	95.9	95.6	92.9	87.6	[illegible]
40.0	83.4	85.3	88.6	90.2	92.7	94.0	94.5	93.6	92.3	90.4	84.7	[illegible]
50.0	80.6	82.2	85.6	86.9	90.1	90.7	91.3	90.9	89.1	87.2	82.7	[illegible]
63.0	77.4	78.7	82.1	85.0	85.8	86.0	87.6	87.0	85.3	84.6	81.3	[illegible]
80.0	73.0	74.6	78.2	79.4	82.6	83.1	83.7	84.9	81.6	81.2	79.9	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	105.0	105.9	107.6	108.9	110.7	112.5	114.6	116.7	118.9	121.8	122.4	OAPWL = 137.7

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND 5766 RIG ID 7055C? TEST DATE 12/03/76 SCALE RATIO 7.0/1 RUN NUMBER [illegible] CONDITION 6504

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S	137.0	147.1	KG/S	60.[illegible]	66.[illegible]
P.R.		3.74	1.09		3.74	1.09	THRUST,ICL LB					
TEMP	(R)	1460.0	651.0	(K)	762.2	361.7	THRUST,MEA LB					
RHO	LB/FT3	0.033	0.073	KG/M3	0.526	1.161	AREA (MOD) SQFT		0.0	SQM		0.0
VEL	FPS	1577.4	1046.2	M/S	480.9	318.9	W (MODEL) LB/S	2.7	2.[illegible]	KG/S	1.[illegible]	1.1

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	64.1	64.7	66.7	67.4	68.3	69.7	72.0	75.0	77.5	79.8	80.1
63	66.5	67.0	69.4	71.3	72.4	73.4	75.3	77.7	81.0	83.3	85.1
80	68.7	69.7	70.5	71.5	72.5	73.7	75.8	78.0	83.1	85.2	81.4
100	71.2	71.4	72.4	73.6	74.2	75.3	77.7	80.8	83.7	86.2	87.4
125	70.7	71.7	72.2	73.9	74.7	75.0	77.6	80.6	84.4	86.6	82.0
160	70.5	71.2	72.9	74.1	75.5	77.2	79.2	81.6	83.4	85.4	87.3
200	70.4	71.6	73.5	74.5	76.1	77.1	79.6	81.9	83.1	83.2	79.8
250	69.8	71.4	73.2	74.1	75.8	77.2	79.5	81.4	81.7	81.0	77.6
315	68.6	70.6	72.7	74.6	75.7	77.2	79.4	80.9	80.0	78.0	73.7
400	68.5	70.1	72.4	74.3	75.4	77.5	79.9	80.6	79.3	75.9	71.0
500	68.4	70.4	72.6	74.3	75.9	77.5	79.7	79.9	77.7	73.7	68.7
630	68.8	70.6	72.4	74.3	76.0	77.7	79.6	79.2	76.7	72.7	66.5
800	68.6	69.9	72.3	74.0	75.8	77.2	78.8	78.3	75.1	70.5	63.6
1000	68.1	69.5	71.4	73.5	75.4	76.7	78.2	77.6	73.7	69.1	61.4
1250	68.4	69.6	71.5	73.2	74.9	76.1	77.6	76.3	72.7	67.9	59.8
1600	65.4	67.9	70.6	72.2	74.2	75.5	76.1	74.7	71.2	66.3	57.4
2000	64.3	66.7	69.7	71.3	73.3	74.4	74.8	73.1	69.3	64.5	53.8
2500	62.6	65.0	67.8	69.8	71.6	72.4	73.0	71.1	67.8	61.7	49.0
3150	59.3	62.5	65.4	67.3	69.2	70.4	69.8	67.5	63.4	56.4	42.2
4000	56.0	59.3	63.0	64.9	66.7	68.5	66.6	63.5	59.3	50.9	34.3
5000	53.1	56.8	60.4	62.8	65.3	65.2	64.4	60.8	55.0	47.0	28.0
6300	49.5	52.5	56.7	58.6	60.1	61.0	59.6	55.2	49.5	34.5	18.2
8000	47.8	46.0	51.2	52.9	55.7	55.1	53.5	49.5	41.9	30.9	6.9
10000	36.8	37.1	42.1	44.3	45.6	45.2	43.0	36.5	26.3	14.4	0.0
OASPL	81.0	82.5	84.5	85.9	87.4	88.8	90.0	91.6	92.8	93.0	90.8
PNL	88.3	90.0	91.2	90.9	[illegible]	97.9	98.7	98.1	96.9	95.5	90.7
400. SIDELINE											
PNL	101.4	103.4	106.6	107.7	109.8	108.0	111.7	111.7	109.5	107.4	102.5
2000. SIDELINE											
PNL	81.0	83.4	86.1	87.7	89.5	90.0	91.5	91.6	90.7	89.4	84.5
4000. SIDELINE											
PNL	71.9	73.7	75.7	77.2	78.9	80.2	81.7	81.9	81.3	80.2	74.8
8000. SIDELINE											
PNL	64.8	66.9	67.4	70.9	72.5	73.7	75.3	75.7	75.4	74.3	68.5

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Scalloped Long Flowpath Mixer Without Engine Secondary
Flow Simulation; Configuration 5A; Condition 6505

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 705307 TEST DATE 12/03/76 SCALE RATIO 7.0/1 RUN NUMBER 20065 CONDITION 6505

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S	[illegible]	[illegible]	KG/S	[illegible]	[illegible]
P.R.		1.81	1.76		1.81	1.76	THRUST,TOL LB			N		
TEMP	(R)	1434.0	658.0	(K)	796.7	365.6	THRUST,MEA LB		0.0	N		0.0
RHO	LB/FT3	0.032	0.071	KG/M3	0.520	1.140	AREA (MOD) SQFT			SQM		
VEL	FPS	1643.0	1084.7	M/S	501.0	330.6	W (MODEL) LB/S	[illegible]	[illegible]	KG/S	[illegible]	[illegible]

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0 FT RADIUS — RAW CORRECTED SPL - [illegible]

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	[illegible]
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.100	78.9	82.1	84.9	84.7	85.3	85.6	87.6	90.6	91.9	95.9	100.5	[illegible]
.125	81.5	85.9	85.3	85.2	86.5	87.7	87.6	90.1	94.2	97.7	101.1	[illegible]
.160	84.3	86.6	[illegible]	85.9	86.7	[illegible]	87.6	89.8	94.5	99.6	102.1	[illegible]
.200	83.1	83.6	86.4	86.6	88.5	89.5	91.6	93.8	98.5	101.6	106.4	[illegible]
.250	84.2	85.6	87.3	88.8	89.6	90.1	92.8	96.1	100.9	105.6	107.7	[illegible]
.315	87.6	87.0	89.1	89.0	90.7	92.4	95.3	99.5	103.8	108.4	111.9	[illegible]
.400	90.6	90.4	92.1	93.5	94.8	96.4	98.7	102.6	107.5	112.2	115.4	[illegible]
.500	92.3	92.5	93.1	93.7	94.5	96.6	99.7	103.7	109.6	114.2	115.2	[illegible]
.630	95.1	94.2	95.7	96.1	96.9	98.3	101.6	106.0	110.6	115.1	115.0	[illegible]
.800	94.2	94.6	95.1	95.5	97.6	98.9	101.4	106.0	111.6	115.9	115.6	[illegible]
1.00	94.6	96.1	96.0	96.7	98.4	100.6	103.2	106.8	111.3	115.4	115.7	[illegible]
1.25	95.0	95.3	96.9	97.6	96.9	100.5	103.6	107.1	110.6	113.6	113.6	[illegible]
1.60	94.5	95.3	96.6	97.3	98.8	100.8	103.9	106.9	109.1	111.8	112.5	[illegible]
2.00	93.7	94.6	96.2	97.1	98.8	100.9	104.2	106.7	107.8	109.2	109.6	[illegible]
2.50	93.6	94.6	96.2	97.3	99.3	101.4	104.6	106.5	107.3	107.3	107.7	[illegible]
3.15	91.7	94.9	96.4	97.6	99.3	101.5	104.7	106.1	105.9	105.5	105.9	[illegible]
4.00	93.9	94.9	96.7	97.9	99.7	101.9	104.8	105.8	105.1	104.4	104.6	[illegible]
5.00	94.1	94.6	96.5	97.9	99.6	101.9	104.4	105.2	104.1	103.5	102.6	[illegible]
6.30	94.0	94.5	96.6	97.8	99.6	102.0	104.3	104.9	103.4	102.8	101.3	[illegible]
8.00	92.9	94.6	96.7	98.0	100.6	102.1	104.6	104.4	103.4	102.6	100.9	[illegible]
10.0	92.7	94.3	96.4	97.6	99.9	101.9	103.7	103.6	102.8	102.5	100.6	[illegible]
12.5	92.6	93.8	96.5	97.6	99.9	101.7	103.2	103.3	102.2	102.0	99.2	[illegible]
16.0	91.9	93.1	95.5	97.1	99.5	101.2	102.7	102.6	101.6	101.2	97.6	[illegible]
20.0	90.1	91.9	94.3	95.6	96.2	100.0	101.0	101.0	100.2	99.0	94.9	[illegible]
25.0	88.8	[illegible]	93.7	95.1	97.3	96.4	99.7	99.0	96.9	97.1	92.5	[illegible]
31.5	86.7	88.9	92.0	93.5	96.7	97.4	98.3	97.7	96.6	95.0	94.1	[illegible]
40.0	84.6	86.6	89.9	91.3	94.1	95.5	96.0	95.3	94.0	92.4	87.0	[illegible]
50.0	81.8	83.5	86.9	88.0	91.4	92.1	92.8	92.7	91.0	89.4	84.6	[illegible]
63.0	78.5	80.1	83.4	[illegible]	87.2	88.6	89.3	89.3	87.2	86.4	82.7	[illegible]
80.0	74.6	76.0	79.4	84.6	85.4	84.6	85.2	86.5	85.5	82.8	81.0	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
OSPL	106.4	107.2	109.0	110.1	111.9	113.6	116.2	118.8	120.5	123.7	124.3	

OAPWL = [illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 705307 TEST DATE 12/03/76 SCALE RATIO 7.0/1 RUN NUMBER 20065 CONDITION 6505

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S	339.7	267.0	KG/S	62.9	86.7
P.R.		1.81	1.76		1.81	1.76	THRUST,TOL LB			N		
TEMP	(R)	1434.0	658.0	(K)	796.7	365.6	THRUST,MEA LB		0.0	N		0.0
RHO	LB/FT3	0.032	0.071	KG/M3	0.520	1.140	AREA (MOD) SQFT			SQM		
VEL	FPS	1643.0	1084.7	M/S	501.0	330.6	W (MODEL) LB/S	2.8	3.0	KG/S	1.3	1.4

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	65.1	66.6	67.7	68.9	69.3	70.6	72.8	75.9	78.6	81.0	81.1
63	67.5	68.6	70.7	72.2	73.4	74.6	76.2	79.0	82.3	84.8	84.6
80	69.8	70.7	71.7	72.4	73.5	74.8	76.7	80.1	84.4	86.8	83.4
100	72.4	72.3	74.2	74.7	75.4	76.4	76.9	82.2	85.7	87.7	83.8
125	71.5	72.9	73.6	73.6	76.1	77.0	78.7	82.2	86.2	88.3	84.4
160	71.8	72.6	74.4	75.7	76.8	78.5	80.4	82.9	85.8	87.5	84.2
200	72.2	73.2	75.3	76.1	77.3	78.4	81.6	83.7	84.1	84.7	82.3
250	71.6	73.1	74.9	75.7	77.1	78.6	81.0	82.8	83.4	83.7	80.7
315	70.5	72.2	74.2	75.3	76.8	78.5	81.6	82.3	81.7	80.6	77.1
400	70.1	72.1	74.1	75.4	77.2	78.9	82.3	82.6	81.0	78.5	74.8
500	70.1	71.8	74.1	75.5	77.6	78.7	81.1	81.3	79.3	76.3	72.4
630	70.1	71.9	74.7	75.5	77.2	78.9	81.0	80.7	78.2	74.7	69.8
800	69.9	71.2	73.6	75.2	76.7	78.9	80.2	79.7	76.6	72.9	67.1
1000	69.3	70.9	73.3	74.8	76.5	78.2	79.6	78.3	75.2	71.5	64.7
1250	67.7	70.3	72.9	74.4	76.2	77.8	78.0	77.7	74.2	70.4	62.9
1600	66.6	69.7	71.9	73.5	75.4	76.8	77.6	76.1	72.7	68.7	60.3
2000	65.6	67.9	71.2	72.5	74.6	75.8	76.2	74.6	70.9	66.6	56.5
2500	63.7	66.1	69.2	71.0	73.7	74.7	74.5	72.5	68.8	63.8	56.6
3150	60.4	63.6	66.7	68.5	70.6	71.7	71.3	69.2	65.1	56.6	[illegible]
4000	57.1	60.8	64.4	66.1	68.0	68.2	69.0	64.9	61.8	52.9	36.6
5000	54.2	56.1	62.1	63.9	66.6	66.6	65.8	62.6	57.4	49.1	31.3
6300	49.7	53.6	58.0	59.7	62.2	62.5	61.1	57.3	51.2	41.5	20.5
8000	44.0	47.9	52.5	54.0	57.6	56.3	55.6	51.3	43.6	32.5	0.0
10000	33.9	38.5	41.6	45.6	47.2	46.6	44.7	40.0	30.2	16.4	0.0
OASPL	82.4	83.8	85.9	87.1	88.6	90.1	91.9	91.1	94.4	95.6	92.6
PNL	89.6	91.6	94.0	96.1	98.1	99.2	100.2	99.6	98.7	97.7	93.8
400. SIDELINE											
PNL	107.7	109.7	107.4	108.9	110.9	112.2	113.2	112.7	111.1	109.7	105.2
2000. SIDELINE											
PNL	92.4	94.7	97.6	99.0	90.6	92.6	92.9	93.0	[illegible]	91.5	86.9
4000. SIDELINE											
PNL	72.4	74.6	77.1	78.5	[illegible]	[illegible]	[illegible]	[illegible]	83.3	82.5	77.3
6000. SIDELINE											
PNL	66.2	68.4	70.8	72.2	73.6	75.1	76.8	77.1	77.3	76.0	70.4

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

[illegible] Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 5A; Condition 6506

a.) Model Data Measured At 15 Ft. Radius

STAND 8/0A RIG ID Y05507 TEST DATE 1/03/76 SCALE RATIO 7.071 RUN NUMBER 2006[illegible] CONDITION 6506

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		1.87	1.86		1.87	1.86
TEMP	(R)	1481.0	660.0	(K)	822.8	366.9
DNC	LB/FT3	0.032	0.071	KG/M3	0.507	1.138
VEL	FPS	1716.3	1111.0	M/S	523.1	338.9

MASS FLOW LB/S; THRUST,IDL LB; THRUST,MEA LB; AREA (MOD) SQFT; W (MODEL) LB/S — [illegible]

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160
	MICROPHONE ANGLES IN DEGREES										
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	80.3	83.4	85.5	85.9	86.5	86.7	88.3	91.7	92.6	96.7	101.5
.125	82.3	86.4	85.4	86.0	87.0	88.0	87.6	90.4	94.8	98.2	101.7
.160	85.5	87.4	85.9	86.5	85.5	88.3	88.3	90.5	95.2	100.4	103.7
.200	84.1	84.5	87.2	88.0	89.5	90.5	91.9	94.2	99.6	100.0	107.0
.250	89.9	88.4	88.2	89.9	90.1	91.2	93.1	96.5	101.7	106.7	108.9
.315	88.0	88.8	90.2	90.8	91.0	93.4	96.1	100.1	104.7	109.2	113.1
.400	91.1	91.4	93.1	94.3	95.7	97.3	99.4	103.3	108.5	112.8	116.1
.500	93.5	93.5	94.0	94.8	95.9	97.0	100.0	104.3	110.4	115.4	115.4
.630	94.2	95.1	96.5	97.1	97.9	99.6	102.5	106.9	111.9	116.2	115.8
.800	95.6	96.6	96.0	97.8	98.7	100.1	102.2	107.2	113.0	117.1	116.5
1.00	96.0	96.1	97.3	98.2	99.7	101.4	104.3	108.1	113.0	117.0	117.1
1.25	96.7	96.6	98.2	99.1	100.0	102.1	104.4	106.4	112.3	115.4	115.7
1.60	96.5	96.9	98.3	99.1	100.3	102.4	104.9	106.1	110.8	114.2	114.9
2.00	95.8	96.1	97.6	98.6	100.2	102.4	105.2	107.8	109.4	111.5	112.6
2.50	95.3	96.0	97.7	98.9	100.6	102.8	105.7	107.7	108.8	109.9	110.9
3.15	95.2	95.9	97.7	98.9	100.7	102.9	105.8	107.4	107.4	108.1	109.0
4.00	95.4	96.2	97.4	99.2	101.0	103.5	105.8	106.9	106.6	106.0	107.2
5.00	95.5	95.9	97.6	99.2	101.0	103.5	105.4	106.3	105.6	105.6	105.2
6.30	95.4	95.8	97.6	99.1	101.2	103.3	105.3	105.6	104.9	105.0	104.1
8.00	94.9	95.7	97.0	99.4	101.3	103.5	105.1	105.6	104.5	104.8	103.5
10.0	94.3	95.5	97.6	99.1	101.2	103.3	104.9	105.0	104.3	104.6	103.2
12.5	93.9	94.9	97.5	98.9	101.1	103.2	104.4	104.5	103.7	103.9	101.6
16.0	93.5	94.3	96.6	98.6	100.8	102.7	103.8	103.4	103.1	103.1	99.9
20.0	91.4	93.0	95.3	97.3	99.6	101.5	102.3	102.2	101.7	100.8	97.2
25.0	90.0	91.9	94.0	96.6	98.7	100.0	100.4	100.3	100.4	99.6	94.6
31.5	88.0	89.8	93.2	95.0	97.9	98.8	99.5	98.0	98.2	96.8	92.4
40.0	85.0	87.7	91.1	92.9	95.3	97.0	97.2	96.6	95.3	94.4	89.3
50.0	83.2	84.5	88.0	89.5	92.7	93.6	94.2	93.6	92.5	91.3	87.4
63.0	79.7	81.1	84.5	86.3	88.7	89.9	90.7	90.1	88.9	88.4	85.4
80.0	75.3	78.9	80.7	82.1	84.9	86.4	88.0	86.9	85.5	85.6	83.3
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	107.9	108.4	110.1	111.3	113.2	115.2	117.2	119.2	122.0	125.2	125.7

FAN COEFFICIENT SPL — [illegible]

OAPWL = 1[illegible].7

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND 8/0A RIG ID Y05507 TEST DATE 1/03/76 SCALE RATIO 7.071 RUN NUMBER 2006[illegible] CONDITION 6506

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		1.87	1.86		1.87	1.86
TEMP	(R)	1481.0	660.0	(K)	822.8	366.9
DNC	LB/FT3	0.032	0.071	KG/M3	0.507	1.138
VEL	FPS	1716.3	1111.0	M/S	523.1	338.9

MASS FLOW LB/S 142.0 166.5 KG/S; THRUST,IDL LB; THRUST,MEA LB; AREA (MOD) SQFT; W (MODEL) LB/S — [illegible]

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE

FREQ	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
	ANGLE IN DEGREES										
50	66.3	67.0	68.8	69.5	70.4	71.6	73.6	76.5	79.5	81.0	82.3
63	68.6	69.6	71.7	73.0	74.3	75.5	76.9	79.7	83.3	85.4	85.3
80	71.0	71.7	72.0	73.5	74.5	76.0	77.5	80.9	85.7	87.7	84.2
100	73.5	73.2	75.0	75.9	76.9	77.7	79.6	83.1	86.5	88.6	84.6
125	72.9	74.1	74.5	76.6	77.2	78.2	79.5	83.4	87.6	89.5	83.3
160	73.2	74.0	75.7	76.7	78.1	79.0	81.5	84.2	87.5	89.1	83.0
200	73.9	74.7	76.0	77.6	79.0	80.0	82.1	84.5	86.0	87.5	84.2
250	73.6	74.7	76.0	77.5	79.0	80.2	82.0	84.0	85.1	86.1	83.1
315	72.6	73.7	75.6	76.0	78.2	80.0	82.0	83.4	83.3	82.9	80.1
400	72.0	73.5	75.0	77.0	78.5	80.3	82.4	83.7	82.0	81.1	76.0
500	71.6	73.1	75.4	76.0	78.4	80.1	82.2	82.4	80.0	78.9	75.5
630	71.6	73.4	75.3	76.0	78.5	80.3	82.0	81.5	79.7	77.4	73.0
800	71.3	72.5	74.7	76.5	78.1	80.1	81.7	80.0	78.1	75.2	69.9
1000	70.7	72.0	74.3	75.4	77.0	79.5	80.0	79.5	76.7	73.7	67.5
1250	69.2	71.4	74.0	75.0	77.5	79.4	79.9	78.9	75.0	72.0	65.5
1600	68.2	70.4	71.1	74.0	76.7	78.2	78.0	77.3	74.2	70.0	62.9
2000	66.9	69.0	72.2	73.0	75.4	77.3	77.4	74.0	72.4	68.5	58.9
2500	65.1	67.3	70.3	72.5	74.5	75.7	75.6	73.1	70.1	65.5	53.9
3150	61.7	64.7	67.7	70.0	72.0	73.2	72.6	70.4	66.0	60.4	46.9
4000	58.3	61.7	65.5	67.6	69.4	69.6	69.2	66.2	62.9	54.0	38.0
5000	55.5	59.6	63.3	65.4	66.0	66.0	67.0	63.7	59.0	50.9	33.0
6300	50.9	54.7	59.2	61.3	63.0	64.5	62.3	58.0	52.7	43.5	22.0
8000	45.4	48.9	53.0	55.5	56.3	58.0	56.4	52.2	45.3	34.6	11.0
10000	35.1	39.5	44.7	46.0	48.7	48.3	46.1	44.0	31.9	18.4	0.0
OASPL	83.9	85.1	87.1	88.5	89.9	91.4	92.0	94.2	95.9	97.0	93.9
PNL	93.3	93.2	95.0	97.0	99.4	100.7	101.3	100.7	100.4	99.5	95.1

400. SIDELINE											
PNL	104.1	105.9	108.3	110.4	112.2	113.6	114.3	113.9	112.6	111.5	107.3
2000. SIDELINE											
PNL	83.9	85.9	88.7	90.6	91.1	93.5	94.0	94.2	94.0	93.4	88.4
4000. SIDELINE											
PNL	74.4	76.0	78.4	80.0	81.5	82.9	84.2	84.5	84.0	[illegible]	79.3
8000. SIDELINE											
PNL	67.4	69.7	72.2	73.7	74.7	76.6	77.4	78.4	79.1	78.5	77.4

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Cutback Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 5A; Condition 6507

a.) Model Data Measured At 15 Ft. Radius

STAND 3206 RIG 10 7US367 TEST DATE 12/03/76 SCALE RATIO 7.0/1 RUN NUMBER 2U065 CONDITION 6507

[illegible]

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	[illegible]
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.100	81.1	84.1	86.5	86.6	87.4	87.7	89.4	91.7	93.4	97.3	102.1	[illegible]
.125	82.7	86.5	88.4	88.6	89.1	89.6	88.8	91.8	95.6	99.1	102.5	[illegible]
.160	86.5	86.9	87.4	87.3	88.6	87.4	89.2	90.9	96.2	101.0	106.4	[illegible]
.200	85.1	85.1	87.9	88.5	90.2	91.6	92.9	95.1	100.1	105.3	107.6	[illegible]
.250	88.0	87.3	89.8	90.3	91.2	95.1	94.2	97.4	102.4	107.6	109.6	[illegible]
.315	88.9	88.9	90.6	91.5	92.9	95.6	96.9	100.6	104.9	110.1	113.4	[illegible]
.400	91.8	92.4	93.9	94.8	96.5	97.9	100.3	104.3	109.4	113.6	117.0	[illegible]
.500	94.3	94.0	94.9	93.5	96.7	99.4	101.1	105.4	111.5	116.2	116.2	[illegible]
.630	97.1	95.9	96.9	97.8	98.6	100.4	103.3	108.4	113.1	117.4	116.7	[illegible]
.800	96.3	97.6	97.9	98.7	100.0	100.8	103.3	108.4	114.2	118.6	117.9	[illegible]
1.00	97.2	97.3	98.2	99.1	100.6	102.9	105.6	109.4	114.6	118.5	117.9	[illegible]
1.25	97.6	98.0	99.4	100.0	101.0	102.9	106.7	109.7	114.0	117.6	116.9	[illegible]
1.60	97.9	98.7	99.7	100.0	101.7	103.4	106.4	109.5	112.6	116.7	117.0	[illegible]
2.00	97.0	97.8	99.1	99.7	101.6	103.4	106.6	109.3	111.2	114.5	115.3	[illegible]
2.50	96.0	97.6	98.4	99.8	101.9	103.9	107.0	109.2	110.4	112.7	113.3	[illegible]
3.15	98.0	97.2	98.8	99.7	101.6	103.4	107.0	106.7	109.0	110.8	111.8	[illegible]
4.00	96.0	97.0	96.9	99.4	102.1	104.2	107.1	108.3	108.2	109.6	109.7	[illegible]
5.00	96.6	96.9	98.5	99.8	101.9	104.0	106.5	107.5	107.0	106.0	107.5	[illegible]
6.30	96.7	96.0	98.6	99.7	102.1	104.2	106.5	106.4	106.3	107.3	106.1	[illegible]
8.00	95.3	96.0	98.4	99.4	102.6	104.1	106.0	106.5	105.7	106.5	105.1	[illegible]
10.0	96.7	96.1	98.1	99.4	101.0	103.0	105.5	105.7	105.2	106.0	104.4	[illegible]
12.5	96.5	95.5	97.9	99.2	101.6	103.6	105.0	105.1	104.5	105.2	102.7	[illegible]
16.0	93.7	96.7	97.1	98.0	101.3	103.7	104.5	104.7	104.0	104.0	101.1	[illegible]
20.0	91.9	93.4	95.9	97.6	100.0	101.5	102.8	103.0	102.4	102.0	98.5	[illegible]
25.0	90.0	92.0	95.1	96.9	99.1	100.5	101.6	101.1	101.1	100.2	96.5	[illegible]
31.5	88.7	90.6	93.8	95.5	98.5	99.5	100.3	99.0	99.0	98.3	94.2	[illegible]
40.0	87.2	88.9	92.1	93.9	96.6	98.0	98.5	97.9	97.6	96.6	91.7	[illegible]
50.0	84.6	86.1	89.3	90.8	93.2	95.2	95.7	95.1	94.4	93.9	89.9	[illegible]
63.0	81.5	82.4	86.1	87.8	90.4	91.8	92.5	91.7	91.3	91.3	88.4	[illegible]
80.0	77.4	78.7	82.3	83.8	86.7	88.2	88.0	88.6	88.0	88.0	86.0	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
OASPL	109.0	109.5	111.1	112.1	114.2	116.0	118.3	120.4	123.3	126.9	127.6	

OAPWL = [illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND 3206 RIG 10 7US367 TEST DATE 12/03/76 SCALE RATIO 7.0/1 RUN NUMBER 2U065 CONDITION 6507

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S	150.9	152.9	KG/S	68.5	69.1
P.R.		2.98	2.88		2.98	2.88	THRUST,TOC LB			N		
TEMP	(R)	1525.0	676.0	(K)	847.2	375.6	THRUST,MEA LB		0.0	N		0.0
RHO	LB/FT3	0.031	0.071	KG/M3	0.498	1.138	AREA (MOD) SQFT			SQM		
VEL	FPS	1811.9	1159.3	M/S	552.3	353.4	W (MODEL) LB/S	3.1	3.1	KG/S	1.4	1.4

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	66.4	67.1	69.2	70.2	71.5	74.0	74.4	77.4	79.7	82.7	82.6
63	69.3	70.6	72.5	73.5	75.1	76.1	77.6	80.7	84.2	86.4	86.2
80	71.0	72.2	73.5	76.7	75.3	77.6	78.6	83.8	86.3	88.0	85.4
100	74.6	74.6	75.4	76.4	77.4	78.5	80.6	84.2	87.7	89.6	85.1
125	73.6	75.1	75.9	77.3	78.5	76.9	80.6	84.6	88.8	91.0	86.7
160	74.4	75.2	76.6	77.6	79.2	80.6	82.6	85.5	89.3	90.6	86.4
200	75.6	75.4	77.8	78.5	80.2	80.8	83.5	85.8	88.5	89.7	85.4
250	75.4	76.5	78.0	78.4	80.6	81.2	83.5	85.4	86.9	88.6	85.2
315	74.6	75.4	77.1	77.9	79.6	81.0	81.4	84.9	85.1	85.9	82.6
400	73.5	75.1	76.8	77.9	79.6	81.4	83.7	84.7	84.2	83.9	80.6
500	73.2	74.6	76.5	77.6	79.5	81.1	83.4	83.9	82.4	81.6	78.3
630	73.6	74.6	76.4	77.5	79.6	81.2	82.3	83.2	81.3	79.9	75.4
800	74.0	73.5	75.6	77.1	79.0	80.6	82.1	82.0	79.5	77.6	74.2
1000	74.0	73.0	75.3	76.5	78.8	80.4	81.0	80.8	78.1	76.6	69.5
1250	70.1	72.3	74.6	76.3	78.2	79.8	80.8	79.8	76.8	74.3	67.1
1600	69.6	71.6	73.6	75.1	77.3	78.7	79.4	78.6	75.1	72.2	64.1
2000	67.5	69.6	72.6	74.1	76.3	77.7	78.0	76.4	73.2	69.8	60.0
2500	65.5	67.7	70.6	72.7	75.0	76.2	76.3	74.6	71.6	66.4	55.1
3150	62.2	65.1	68.3	70.3	72.4	73.6	73.1	71.2	67.3	61.0	48.2
4000	58.4	62.4	65.5	67.9	69.6	70.1	69.9	67.0	63.2	56.6	40.6
5000	54.2	59.0	63.4	65.4	66.6	66.1	67.6	64.7	59.0	52.4	35.6
6300	51.3	55.9	60.2	60.3	64.7	63.0	63.6	59.9	54.2	45.7	25.2
8000	46.8	50.5	54.9	56.8	59.4	59.6	57.9	57.9	47.2	37.0	14.1
10000	40.9	41.3	46.1	46.3	50.4	50.2	47.9	42.4	34.3	21.3	0.0
OASPL	83.8	84.3	88.3	89.2	90.4	92.3	94.1	95.5	97.3	97.7	93.2
PNL	92.0	93.9	96.6	98.1	100.2	101.4	102.2	101.5	101.6	101.5	96.9

400. SIDELINE											
PNL	104.0	106.7	109.3	110.8	113.0	114.3	115.2	114.9	113.7	113.5	109.1
2000. SIDELINE											
PNL	85.1	86.9	89.5	90.9	92.9	94.2	95.1	95.5	95.5	95.6	90.5
4000. SIDELINE											
PNL	75.4	77.3	79.5	80.7	82.0	83.5	85.4	85.9	86.5	86.5	80.5
6000. SIDELINE											
PNL	69.3	71.1	73.3	74.5	76.3	77.6	78.1	79.7	80.7	80.7	74.4

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Cutback Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 5A; Condition 6508

a.) Model Data Measured At 15 Ft. Radius

STAND 8206 RIG ID 7US307 TEST DATE 12/03/76 SCALE RATIO 7.0/1 RUN NUMBER 20(4)5 CONDITION 6508

	PRIMARY	FAN		PRIMARY	FAN
AREA SQFT			SUM		
P.R.	2.07	1.90		2.07	1.90
TEMP (R)	1550.0	690.0	(K)	865.6	383.3
RHO LB/FT3	0.035	0.070	KG/M3	0.496	1.121
VEL FPS	1884.0	1205.7	M/S	574.2	367.5

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PWL
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.100	82.3	83.7	81.2	87.6	[illegible]	[illegible]	90.2	92.6	94.5	90.6	103.1	[illegible]
.125	83.0	87.1	87.4	87.7	89.0	90.0	89.6	97.3	96.0	100.7	103.5	[illegible]
.160	84.1	90.2	88.9	88.6	88.6	88.5	90.3	91.6	97.2	102.2	105.5	[illegible]
.200	88.3	[illegible]	[illegible]	[illegible]	93.2	93.0	93.9	95.0	103.7	106.7	108.6	[illegible]
.250	87.3	88.4	89.7	91.3	92.6	96.7	95.1	98.1	103.4	108.7	110.7	[illegible]
.315	90.0	89.9	91.7	92.6	93.7	95.7	97.0	101.0	106.3	111.2	114.0	[illegible]
.400	92.6	91.3	94.9	95.7	97.5	98.1	101.2	105.1	110.5	114.7	116.1	[illegible]
.500	95.5	95.1	95.6	96.5	97.6	100.3	101.0	105.1	112.0	117.3	117.2	[illegible]
.630	97.9	96.7	97.9	98.0	99.7	101.3	[illegible]	109.0	114.5	118.5	117.3	[illegible]
.800	97.3	98.0	98.3	99.7	100.9	101.0	[illegible]	109.1	115.0	119.9	[illegible]	[illegible]
1.00	98.4	98.3	99.3	100.3	101.9	104.1	106.7	110.7	116.4	120.0	[illegible]	[illegible]
1.25	98.9	99.3	100.0	101.3	103.0	104.4	107.4	111.1	116.2	119.3	[illegible]	[illegible]
1.60	99.3	100.2	101.2	101.4	103.0	104.7	107.5	110.9	114.8	119.1	120.6	[illegible]
2.00	99.0	99.4	100.6	101.1	[illegible]	104.7	107.0	110.7	113.3	[illegible]	117.8	[illegible]
2.50	98.4	99.1	100.5	101.3	103.2	105.1	108.2	110.6	112.5	116.0	116.0	[illegible]
3.15	98.4	98.7	100.3	101.2	103.6	105.3	106.4	110.2	111.1	[illegible]	114.7	[illegible]
4.00	98.0	98.0	100.3	101.2	103.2	105.4	108.4	109.6	[illegible]	112.9	[illegible]	[illegible]
5.00	98.0	98.2	99.7	101.1	103.6	105.4	107.9	108.9	[illegible]	111.3	110.3	[illegible]
6.30	97.0	96.1	99.9	101.1	103.3	105.6	107.8	108.3	[illegible]	110.5	108.7	[illegible]
8.00	96.4	97.8	99.0	101.2	103.1	105.6	107.5	107.9	[illegible]	109.5	107.7	[illegible]
10.0	95.9	97.5	99.5	100.8	103.2	105.2	107.6	107.3	107.4	106.9	106.9	[illegible]
12.5	95.5	96.8	99.3	100.6	103.0	105.2	106.6	106.5	106.0	107.0	105.2	[illegible]
16.0	94.7	96.1	98.4	100.4	102.6	104.7	106.6	[illegible]	106.2	106.7	103.6	[illegible]
20.0	92.8	96.6	97.3	99.1	101.5	103.6	106.4	[illegible]	104.9	104.7	101.6	[illegible]
25.0	91.5	93.9	96.5	98.9	100.6	101.9	[illegible]	[illegible]	103.3	[illegible]	[illegible]	[illegible]
31.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
40.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
50.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
63.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
80.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
OASPL	110.2	110.0	112.4	113.5	115.4	117.4	119.6	121.0	125.1	120.7	120.5	

OAPWL = [illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND 8206 RIG ID 7US307 TEST DATE 12/03/76 SCALE RATIO 7.0/1 RUN NUMBER 20(4)5 CONDITION 6508

	PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA SQFT			SUM			MASS FLOW LB/S	157.3	157.3	KG/S	71.3	71.3
P.R.	2.07	1.90		2.07	1.90	THRUST,IDL LB					
TEMP (R)	1550.0	690.0	(K)	865.6	383.3	THRUST,MEA LB	0.0			0.0	
RHO LB/FT3	0.035	0.070	KG/M3	0.496	1.121	AREA (MODF SQFT			SUM		
VEL FPS	1884.0	1205.7	M/S	574.2	367.5	W (INCOLE) LB/S	3.2	3.2	KG/S	1.5	1.5

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	67.5	68.1	70.3	71.3	72.3	73.9	75.3	76.7	81.1	83.6	83.0
63	70.3	71.5	73.5	74.9	76.1	76.5	78.7	81.5	85.3	87.3	87.3
80	73.6	73.3	74.0	75.2	76.2	76.5	79.3	82.5	87.0	89.9	88.4
100	75.2	74.8	76.4	77.4	[illegible]	79.0	81.5	85.2	89.1	90.9	88.1
125	76.0	76.3	76.8	78.3	79.4	79.9	81.0	83.9	90.4	92.5	87.7
160	75.6	76.2	77.7	78.0	80.3	82.0	83.9	86.0	90.9	97.1	87.6
200	76.1	77.2	79.2	79.0	81.4	82.3	84.0	87.2	90.7	91.4	87.0
250	76.4	78.0	79.5	79.0	81.3	82.5	84.0	88.0	89.1	91.0	87.0
315	75.0	77.0	76.0	79.3	80.9	82.1	84.0	86.3	87.2	88.9	85.1
400	73.1	76.0	76.4	79.4	81.1	82.0	84.9	86.1	86.3	87.2	83.1
500	74.0	75.9	76.0	79.1	80.7	82.5	84.0	85.4	84.5	85.6	81.2
630	74.2	75.0	77.0	78.0	80.7	82.4	84.0	84.5	83.3	83.7	78.7
800	73.0	74.0	76.0	78.4	80.1	82.0	83.7	83.4	81.6	80.9	75.0
1000	73.1	74.3	76.0	77.9	80.6	81.4	83.1	82.2	80.1	79.2	72.1
1250	71.2	73.5	76.0	77.6	79.5	81.3	82.3	81.2	79.1	77.3	69.7
1600	69.0	[illegible]	75.0	76.5	78.7	80.1	80.9	79.6	77.3	75.1	66.0
2000	68.5	70.9	74.0	75.5	77.7	78.3	79.0	77.0	75.3	72.4	62.3
2500	66.5	69.1	72.1	74.3	76.3	77.7	77.0	76.0	73.7	69.1	57.0
3150	63.1	66.5	69.7	71.0	73.9	75.3	74.7	72.7	69.4	64.3	51.1
4000	59.0	63.7	67.2	69.4	71.3	78.7	78.5	68.5	65.4	56.7	43.3
5000	57.2	61.2	65.3	67.5	[illegible]	70.1	69.5	66.1	62.0	55.3	38.5
6300	53.3	57.3	61.7	63.0	66.2	66.7	65.2	61.5	56.5	48.3	28.2
8000	47.0	56.9	56.5	58.5	61.4	64.2	59.6	55.3	45.7	35.9	17.1
10000	37.0	42.6	47.5	50.0	52.1	51.0	49.5	44.0	36.0	24.3	0.0
OASPL	86.3	87.6	89.4	90.5	92.1	93.0	95.0	96.8	99.2	100.4	96.6
PNL	91.2	95.3	97.9	99.6	101.5	102.4	103.6	103.5	103.7	103.4	98.6

400. SIDELINE

PNL	109.1	109.1	110.6	112.3	115.3	115.0	116.6	116.3	115.6	115.9	111.1

2000. SIDELINE

PNL	88.4	88.3	90.9	92.3	94.1	95.0	96.0	96.0	97.5	97.7	92.4

4000. SIDELINE

PNL	79.4	78.7	80.9	82.2	83.9	85.2	86.7	87.4	88.5	88.0	82.7

6000. SIDELINE

PNL	70.6	72.8	74.8	75.9	77.6	78.9	80.4	81.2	82.9	82.8	76.2

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Cutback Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 5A; Condition 6509

a.) Model Data Measured At 15 Ft. Radius

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0 FT RADIUS

1/3 OB CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.125	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.160	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.200	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.315	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.400	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.630	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.800	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.60	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3.15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6.30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
12.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
40.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
50.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
63.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
80.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
63	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
80	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
100	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
125	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
160	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
200	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
315	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
400	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
630	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
800	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1600	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3150	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6300	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OASPL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PNL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

600. SIDELINE											
PNL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2000. SIDELINE											
PNL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4000. SIDELINE											
PNL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6000. SIDELINE											
PNL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Cutback Scalloped Long Flowpath Mixer Without Engine Secondary Flow Simulation; Configuration 5A; Condition 6510

a.) Model Data Measured At 15 Ft. Radius

STAND [illegible] RIG ID [illegible] TEST DATE 12/03/76 SCALE RATIO [illegible] RUN NUMBER [illegible] CONDITION [illegible]

	PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA SQFT	[illegible]	[illegible]	SQM	[illegible]	[illegible]	MASS FLOW LB/S	[illegible]	[illegible]	KG/S	[illegible]	[illegible]
P.R.	[illegible]	[illegible]		[illegible]	[illegible]	THRUST,IDL LB			N		
TEMP (R)	[illegible]	[illegible]	(K)	[illegible]	[illegible]	THRUST,MEA LB		[illegible]	N		[illegible]
RHO LB/FT3	[illegible]	[illegible]	KG/M3	[illegible]	[illegible]	AREA (MOD) SQFT			SQM		
VEL FPS	[illegible]	[illegible]	M/S	[illegible]	[illegible]	W (MODEL) LB/S	[illegible]	[illegible]	KG/S	[illegible]	[illegible]

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL — FREEFIELD

MICROPHONE ANGLES IN DEGREES

FREQ	[illegible]	[illegible]	[illegible]	[illegible]	100	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	PWL
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OASPL	111.3	111.0	113.4	114.5	116.5	118.4	120.0	123.6	126.0	130.5	129.0	

PWL = [illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 905307 TEST DATE 12/03/76 SCALE RATIO 7.0/3 RUN NUMBER [illegible] CONDITION [illegible]

	PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA SQFT		1.96	SQM			MASS FLOW LB/S	160.7	158.3	KG/S	72.9	71.8
P.R.	2.16	2.02		2.16	2.02	THRUST,IDL LB			N		
TEMP (R)	1617.0	694.6	(K)	898.3	385.6	THRUST,MEA LB		0.0	N		0.0
RHO LB/FT3	0.030	0.070	KG/M3	0.479	1.123	AREA (MOD) SQFT			SQM		
VEL FPS	1960.4	1242.1	M/S	597.5	375.5	W (MODEL) LB/S	3.3	3.2	KG/S	1.5	1.5

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	68.6	68.8	71.1	72.0	73.2	74.4	76.3	79.1	87.1	84.8	84.9
63	71.2	72.3	74.1	75.0	76.9	76.6	79.7	82.5	86.3	88.6	88.4
80	73.9	[illegible]	75.4	75.9	76.8	[illegible]	[illegible]	87.6	88.6	91.2	87.3
100	76.1	[illegible]	77.3	76.2	78.6	80.1	82.5	86.4	90.7	92.1	87.1
125	75.4	76.9	77.6	79.4	80.2	80.7	82.7	87.2	92.0	93.3	88.5
160	76.5	77.2	78.4	79.6	81.2	82.4	84.9	88.2	92.5	93.6	88.7
200	77.6	78.0	80.0	80.7	82.5	83.7	85.6	88.4	92.3	93.0	88.3
250	77.4	79.6	80.5	80.7	82.4	83.2	85.8	86.6	91.2	92.9	88.2
315	77.6	79.1	79.7	80.4	82.1	83.5	85.0	87.6	89.2	91.3	86.6
400	76.5	77.9	79.3	80.4	82.2	83.8	86.3	87.5	88.3	89.4	86.9
500	76.0	77.1	78.9	80.2	81.0	83.5	86.0	86.6	86.6	87.4	83.1
630	75.3	76.7	78.0	79.6	81.8	83.5	85.6	85.9	85.4	86.1	80.2
800	74.9	75.9	77.6	79.3	81.3	83.2	84.0	84.0	83.0	83.8	76.7
1000	74.5	75.4	77.7	79.6	81.2	82.9	84.3	83.6	82.3	81.9	74.1
1250	72.6	74.0	77.3	78.7	80.6	82.3	83.6	82.5	81.1	80.0	71.5
1600	70.8	71.5	76.1	77.6	80.0	81.2	82.3	80.8	79.6	77.6	68.5
2000	69.0	71.9	75.1	76.5	78.9	80.4	80.5	79.2	77.4	74.7	64.5
2500	67.5	70.0	73.2	75.2	77.4	78.8	79.0	77.2	75.1	71.4	59.7
3150	66.1	67.4	76.5	72.9	74.9	76.4	75.9	73.0	71.2	66.6	53.1
4000	61.0	64.0	68.3	70.6	72.4	73.1	72.6	69.1	67.3	61.6	45.5
5000	58.4	62.1	66.4	68.6	71.3	71.5	70.6	67.5	64.0	57.7	40.6
6300	54.2	58.0	62.7	64.9	67.2	67.6	66.3	62.6	58.3	50.9	30.6
8000	48.9	52.6	57.5	59.5	62.5	62.4	60.8	56.7	51.5	42.5	19.6
10000	39.6	43.7	46.7	51.0	53.2	53.1	50.9	45.4	38.7	26.6	0.0
OASPL	87.4	88.6	90.4	91.5	93.2	94.6	96.5	98.1	100.7	102.1	97.8
PNL	99.3	99.3	99.0	100.6	107.6	103.9	104.0	104.6	105.5	105.9	100.2

400. SIDELINE											
PNL	107.1	109.6	111.7	113.3	115.4	116.8	117.6	117.5	117.7	116.0	112.6
2000. SIDELINE											
PNL	87.7	89.4	91.9	91.4	95.4	96.7	97.7	96.2	94.3	94.7	93.1
4000. SIDELINE											
PNL	76.1	79.0	81.9	83.2	85.0	86.3	88.0	88.6	90.3	90.5	86.1
6000. SIDELINE											
PNL	71.9	73.7	75.7	77.0	78.7	79.9	81.7	82.5	84.7	86.6	77.5

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Reference Exhaust System Tested at Ideally Mixed Conditions Without Engine Secondary Flow Simulation; Configuration 2Am; Condition 7401

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 705307 TEST DATE 01/10/77 SCALE RATIO 7.0/1 RUN NUMBER 20074 CONDITION 7401

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		1.44	1.45		1.44	1.45	THRUST,IDL LB			N		
TEMP	(R)	902.0	902.0	(K)	500.6	501.1	THRUST,MEA LB		0.0	N		0.0
RHO	LB/FT3	0.049	0.049	KG/M3	0.785	0.786	AREA (MOD) SQFT			SQM		
VEL	FPS	1036.4	1044.2	M/S	315.3	318.3	W (MODEL) LB/S	2.4	2.1	KG/S	1.1	1.0

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS RAW CORRECTED SPL - (MODEL)

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	POWER DB-12W
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	71.5	74.4	77.0	77.0	78.4	78.7	80.2	82.5	84.2	84.2	92.5	104.7
.125	74.2	78.0	78.5	77.0	79.4	81.0	80.0	82.7	86.7	89.0	92.9	106.0
.160	76.6	74.3	77.6	78.4	78.3	78.9	80.4	82.4	87.0	91.7	94.6	108.9
.200	76.1	77.0	78.7	79.0	81.0	82.7	84.0	86.3	91.0	90.0	90.2	110.5
.250	77.4	78.6	79.9	81.5	82.5	83.6	85.6	88.5	93.2	97.5	99.5	112.1
.315	80.1	80.4	81.4	82.0	83.0	85.4	87.6	91.2	95.0	99.4	103.5	114.0
.400	87.1	83.3	84.0	86.0	87.7	89.0	90.9	93.0	98.1	102.7	106.1	[illegible]
.500	84.5	84.7	85.1	86.2	87.6	89.3	91.2	94.4	100.0	104.1	104.4	110.2
.630	86.4	86.4	87.0	87.0	89.1	90.9	93.0	96.3	100.0	104.7	106.4	119.2
.800	85.0	86.3	86.1	87.9	89.2	90.8	92.7	95.0	99.0	103.7	103.5	[illegible]
1.00	85.6	85.6	86.2	88.1	89.9	91.8	94.1	96.5	99.5	102.2	107.1	117.7
1.25	84.7	85.0	86.9	88.2	89.9	92.1	94.3	97.0	99.3	99.9	98.2	118.0
1.60	84.5	85.7	86.9	88.6	89.9	92.1	94.2	96.5	98.1	98.4	95.4	118.0
2.00	84.6	85.0	87.1	88.3	90.1	92.2	94.2	96.3	97.1	96.1	92.5	119.3
2.50	84.1	85.7	87.1	88.5	90.3	92.3	94.2	95.0	96.5	94.5	91.3	114.9
3.15	84.2	85.0	86.9	88.2	90.2	92.2	93.9	95.2	95.6	92.7	89.2	114.2
4.00	84.6	85.7	86.0	88.3	90.1	92.6	93.7	94.5	93.7	91.2	87.5	113.7
5.00	84.6	84.0	86.2	87.7	89.6	91.4	92.7	93.3	92.3	89.5	85.7	112.1
6.30	84.6	84.6	85.9	87.5	89.3	90.9	92.3	92.5	91.1	88.4	84.7	117.1
8.00	87.1	83.9	85.3	86.7	88.5	90.2	91.4	91.2	89.5	86.5	82.1	111.1
10.0	81.5	83.3	84.6	85.9	87.9	[illegible]	90.6	90.2	88.2	85.2	80.6	110.2
12.5	81.3	82.2	83.0	85.4	87.2	89.0	89.4	88.0	86.7	83.0	78.0	109.2
16.0	80.6	81.4	82.9	84.7	86.2	88.2	89.5	87.8	85.5	82.0	76.0	108.3
20.0	78.6	80.0	81.4	83.2	85.1	86.5	86.6	85.7	83.6	80.0	74.4	108.0
25.0	77.4	79.1	80.7	82.2	83.9	85.2	85.4	83.9	82.4	79.1	73.4	105.0
31.5	75.7	77.4	79.5	80.9	83.4	84.2	84.0	82.6	80.7	77.5	72.4	104.2
40.0	74.3	75.7	78.0	79.5	81.4	82.5	82.4	80.9	78.7	74.1	71.5	104.5
50.0	72.6	73.4	75.5	76.5	79.1	79.8	79.6	78.7	76.6	74.6	71.0	102.1
63.0	69.3	70.5	72.7	73.9	76.0	76.6	77.0	75.0	74.6	73.7	72.4	97.3
80.0	65.3	66.8	69.0	69.9	72.0	73.	73.5	72.6	71.2	72.2	72.6	94.1
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
												LOPWL = [illegible]
OASPL	96.0	97.8	98.9	100.3	102.0	103.0	105.4	[illegible]	109.5	[illegible]	113.2	

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 705307 TEST DATE 01/10/77 SCALE RATIO 7.0/1 RUN NUMBER 20074 CONDITION 7401

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S	120.0	105.3	KG/S	54.5	47.8
P.R.		1.44	1.45		1.44	1.45	THRUST,IDL LB			N		
TEMP	(R)	901.0	902.0	(K)	500.6	501.1	THRUST,MEA LB		0.0	N		0.0
RHO	LB/FT3	0.049	0.049	KG/M3	0.785	0.786	AREA (MOD) SQFT			SQM		
VEL	FPS	1036.4	1044.7	M/S	315.3	318.3	W (MODEL) LB/S	2.4	2.1	KG/S	1.1	1.0

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	57.6	58.6	60.0	61.5	62.4	63.6	65.1	67.6	69.0	72.0	72.7
63	59.6	61.5	63.4	64.7	66.3	67.2	68.4	70.2	72.9	75.3	75.3
80	62.0	62.9	63.7	64.9	66.2	67.5	68.7	70.8	74.0	76.7	73.6
100	63.7	64.5	65.5	66.4	67.6	69.0	70.3	72.5	74.6	77.1	75.2
125	62.3	64.4	64.6	66.5	67.7	68.9	70.0	72.0	74.4	74.1	72.3
160	62.2	63.5	64.6	66.6	68.3	69.7	71.3	72.6	74.0	74.3	70.6
200	61.9	63.7	65.3	66.7	68.3	70.0	71.5	73.1	73.8	72.0	68.7
250	61.6	63.5	65.2	66.4	66.7	69.9	71.3	72.4	72.4	70.3	63.6
315	60.8	63.4	65.1	66.5	68.1	69.8	71.6	71.9	71.6	67.5	60.6
400	60.8	63.2	65.0	66.6	68.2	69.8	70.9	71.3	70.3	65.7	58.4
500	60.6	63.0	64.6	66.1	67.9	69.4	70.3	70.4	68.4	63.5	55.7
630	60.6	62.7	64.3	65.9	67.6	69.0	69.9	69.4	66.0	61.5	53.3
800	60.4	61.4	63.1	65.0	66.7	68.0	68.5	67.8	[illegible]	59.1	50.4
1000	59.3	60.8	62.6	64.3	66.0	67.1	67.6	66.4	62.9	57.1	47.6
1250	58.9	59.6	61.5	63.1	64.7	65.9	66.2	64.5	60.0	54.3	44.1
1600	55.4	58.6	60.1	61.6	63.4	64.6	64.5	62.5	58.1	51.4	40.3
2000	54.3	56.3	58.5	60.3	61.9	63.1	62.4	60.1	55.4	48.4	36.1
2500	51.8	54.4	56.6	58.6	59.9	61.2	60.3	57.7	52.5	45.0	30.8
3150	48.9	51.7	53.8	55.9	57.5	58.2	56.9	53.9	48.5	40.2	24.1
4000	45.7	48.9	51.4	53.2	54.6	55.0	53.7	49.8	44.5	34.9	17.5
5000	43.2	46.0	49.0	51.3	53.5	53.4	51.5	47.5	41.5	31.0	13.6
6300	39.4	42.7	46.1	47.9	49.5	49.5	47.5	42.9	35.9	25.2	5.0
8000	34.2	37.0	41.1	42.5	44.7	44.2	42.0	37.3	29.4	17.7	0.0
10000	24.7	28.9	32.7	34.4	36.0	35.0	32.4	26.5	17.0	3.7	0.0
OASPL	73.0	74.7	76.2	77.7	79.3	80.7	81.7	82.6	83.5	84.1	81.7
PNL	78.8	81.1	83.1	84.9	86.4	87.7	87.9	87.6	86.3	83.9	78.9
400. SIDELINE PNL	91.8	94.0	95.9	97.6	99.2	100.5	100.6	99.7	98.2	95.9	91.3
2000. SIDELINE PNL	72.6	74.4	76.4	78.0	79.7	81.0	81.5	81.3	80.0	77.5	72.4
4000. SIDELINE PNL	62.3	64.8	66.8	68.5	70.1	71.4	72.0	71.8	70.8	68.3	62.9
6000. SIDELINE PNL	55.9	58.6	60.4	62.4	64.0	65.3	65.9	65.7	64.9	[illegible]	58.9

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Reference Exhaust System Tested at Ideally Mixed Conditions Without Engine Secondary Flow Simulation; Configuration 2Am; Condition 7402

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 705307 TEST DATE 01/10/77 SCALE RATIO 7.0/1 RUN NUMBER 2007 CONDITION 7402

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		1.49	1.50		1.49	1.50	THRUST,IDL	LB			N		
TEMP	(R)	920.0	910.0	(K)	514.4	510.0	THRUST,MEA	LB		0.0	N		0.0
RHO	LB/FT3	0.048	0.049	KG/M3	0.771	0.779	AREA (MOD)	SQFT			SQM		
VEL	FPS	1095.2	1096.6	M/S	333.8	334.3	W (MODEL)	LB/S	2.6	7	KG/S	1.2	1.6

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL – (MODEL)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	POWER DB-12W
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	77.0	75.7	78.3	79.1	79.6	80.1	81.7	84.1	85.6	89.5	93.0	106.1
.125	75.6	77.9	79.0	79.1	81.1	82.3	81.4	84.1	88.3	91.2	94.6	107.4
.160	78.2	80.9	79.3	79.0	79.7	80.4	81.0	83.7	88.7	93.5	96.5	108.6
.200	77.4	78.2	80.2	81.4	87.6	84.3	85.6	87.9	92.7	97.7	100.0	112.7
.250	78.0	80.1	81.2	83.0	84.2	85.2	87.2	90.0	94.7	99.3	102.4	113.8
.315	81.7	81.8	82.9	84.2	85.1	87.6	89.1	92.9	97.1	101.2	105.4	116.5
.400	83.3	84.6	86.3	87.4	89.4	90.7	92.6	95.4	100.0	104.7	108.0	119.5
.500	80.3	86.4	86.9	88.1	89.2	90.9	93.1	96.7	102.2	106.5	106.5	120.5
.630	86.4	88.2	88.7	89.6	90.7	92.6	94.6	98.3	102.4	107.4	108.7	121.6
.800	87.0	88.7	88.1	89.7	91.1	92.6	94.5	98.8	102.6	106.8	106.2	120.9
1.00	87.2	87.5	88.3	89.8	93.7	93.9	96.1	98.8	102.1	105.3	105.8	120.4
1.25	86.7	87.5	88.6	90.6	91.9	93.9	96.3	99.3	101.8	102.9	101.8	119.3
1.60	86.3	87.4	88.8	89.9	91.7	94.0	96.2	98.7	100.5	101.0	98.5	[illegible]
2.00	85.6	87.4	88.8	90.0	91.9	93.9	96.2	98.6	99.6	98.6	95.5	117.5
2.50	85.8	87.3	88.7	90.2	92.1	94.6	96.3	98.0	98.8	96.8	93.9	118.6
3.15	85.8	87.4	88.5	89.9	92.0	93.9	95.9	97.3	97.3	95.6	91.6	[illegible]
4.00	86.3	87.3	88.6	90.2	91.9	93.9	95.9	96.7	96.3	93.8	89.8	115.8
5.00	86.2	86.5	88.0	89.5	91.5	93.3	94.9	95.5	94.7	91.6	87.0	114.8
6.30	85.0	86.3	87.7	89.9	91.2	93.6	94.5	94.6	93.4	90.5	86.4	[illegible]
8.00	83.9	85.6	87.1	88.6	90.6	92.3	93.6	93.4	91.0	88.0	84.7	113.2
10.0	83.1	84.9	86.3	87.9	90.6	91.7	92.0	92.4	90.5	87.3	82.6	112.3
12.5	82.0	83.9	85.7	87.4	89.2	91.6	91.7	91.0	88.9	86.6	81.1	111.3
16.0	81.6	83.1	84.7	86.5	88.4	90.1	90.7	89.7	87.6	84.7	79.2	110.3
20.0	80.9	81.8	83.5	85.3	87.0	88.6	88.9	88.6	86.0	82.9	76.9	108.8
25.0	79.1	81.6	82.6	84.3	85.9	87.3	87.7	86.1	84.8	81.2	75.0	107.5
31.5	77.4	79.6	81.4	82.9	85.5	86.1	86.3	84.6	82.8	79.0	74.6	106.1
40.0	75.7	77.5	79.9	81.4	83.4	84.5	84.5	82.7	80.9	78.1	73.7	104.5
50.0	73.0	75.1	77.4	78.5	81.2	81.9	82.6	80.6	78.8	76.8	74.1	102.1
63.0	76.9	77.2	76.5	75.9	77.9	78.8	79.2	77.7	78.2	75.0	75.1	[illegible]
80.0	68.9	68.6	70.8	71.0	74.3	75.0	75.6	74.1	73.3	[illegible]	74.5	90.0
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	98.5	99.5	100.9	102.1	103.8	105.6	107.5	109.4	111.0	114.7	115.6	

OAPWL = [illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 705307 TEST DATE 01/10/77 SCALE RATIO 7.0/1 RUN NUMBER 2007 CONDITION 7402

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	125.9	[illegible]	KG/S	57.1	[illegible]
P.R.		1.49	1.50		1.49	1.50	THRUST,IDL	LB			N		
TEMP	(R)	920.0	910.0	(K)	514.4	510.0	THRUST,MEA	LB		0.0	N		0.0
RHO	LB/FT3	0.048	0.049	KG/M3	0.771	0.779	AREA (MOD)	SQFT			SQM		
VEL	FPS	1095.2	1096.6	M/S	333.8	334.3	W (MODEL)	LB/S	2.6	[illegible]	KG/S	[illegible]	1.6

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	59.2	60.0	61.5	62.9	63.7	63.2	66.0	69.3	71.9	73.0	74.6
63	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
80	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
100	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
125	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
160	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
200	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
315	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
400	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
630	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
800	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1600	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3150	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6300	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10000	20.3	30.0	34.5	30.4	37.9	37.2	34.6	28.6	19.2	5.0	0.0
OASPL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PNL	80.0	82.0	85.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

400. SIDELINE PNL	93.6	95.7	97.7	99.5	101.2	102.4	102.7	101.8	100.7	98.6	93.0
2000. SIDELINE PNL	75.0	76.2	78.2	79.9	81.6	82.9	[illegible]	83.5	82.7	80.6	75.3
4000. SIDELINE PNL	64.3	66.6	68.6	70.4	72.0	73.3	[illegible]	74.1	73.5	71.6	65.9
6000. SIDELINE PNL	57.0	60.4	62.5	64.2	65.9	67.2	[illegible]	68.0	67.6	65.7	59.0

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Reference Exhaust System Tested at Ideally Mixed Conditions Without Engine Secondary Flow Simulation; Configuration 2Am; Condition 7403

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 705307 TEST DATE 01/10/77 SCALE RATIO 7.0/1 RUN NUMBER 20074 CONDITION 7403

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		1.67	1.69		1.67	1.69	THRUST,IDL	LB			N		
TEMP	(R)	982.0	994.0	(K)	545.6	552.2	THRUST,MEA	LB		0.0	N		0.0
RHO	LB/FT3	0.047	0.046	KG/M3	0.750	0.743	AREA (MOD)	SQFT			SQM		
VEL	FPS	1269.4	1291.0	M/S	386.9	393.7	W (MODEL)	LB/S	2.9	2.6	KG/S	1.3	1.2

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (MODEL)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	POWER DB-1.0W
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	78.4	79.9	82.6	82.3	83.0	83.4	84.0	87.6	89.2	93.0	97.0	109.0
.125	79.2	83.3	82.7	82.5	84.9	85.0	84.6	87.6	91.6	94.7	98.2	110.9
.160	82.3	84.9	82.9	83.6	83.3	83.6	85.2	87.5	92.4	97.3	100.6	112.4
.200	81.5	82.1	83.9	85.7	86.4	87.0	89.1	91.6	96.6	101.5	104.2	116.1
.250	82.3	83.6	84.6	86.8	87.3	88.6	90.7	94.0	98.6	103.2	105.7	117.8
.315	85.1	85.2	86.6	87.7	88.8	90.6	92.9	96.8	101.1	105.4	109.0	120.6
.400	87.5	88.7	90.1	91.0	92.7	94.2	96.1	99.0	104.7	109.2	112.5	123.9
.500	90.6	90.3	90.8	91.8	92.0	94.8	96.8	101.1	107.1	111.5	111.2	125.2
.630	93.1	92.5	92.7	93.7	94.7	96.5	99.1	103.1	107.9	112.6	113.9	126.7
.800	91.8	93.0	92.5	94.1	95.3	96.8	98.7	103.2	108.8	112.9	112.6	126.7
1.00	92.4	92.6	93.1	94.2	95.9	98.5	100.6	104.0	108.5	112.4	112.8	126.8
1.25	92.8	93.0	93.9	94.9	96.6	98.4	100.9	104.4	108.0	110.4	111.6	125.7
1.60	93.0	92.6	93.6	94.6	96.1	98.4	100.8	104.6	106.5	108.4	108.6	124.4
2.00	94.5	91.9	92.9	94.2	96.6	98.5	100.9	103.9	105.4	105.4	106.7	123.6
2.50	94.2	91.5	92.9	94.3	96.2	98.6	101.0	103.5	104.5	103.3	102.7	122.3
3.15	94.2	91.6	92.7	94.1	96.1	98.5	100.9	102.9	103.0	101.4	99.4	121.5
4.00	94.6	91.6	92.0	94.4	96.7	98.5	100.8	102.7	101.8	99.7	97.4	120.9
5.00	94.5	90.9	92.3	93.8	95.8	98.0	100.0	101.1	100.3	97.4	95.2	119.9
6.30	94.1	90.7	92.0	93.6	95.6	97.7	99.6	100.1	99.0	96.4	93.3	119.2
8.00	88.6	90.3	91.7	93.3	95.2	97.6	98.9	99.1	97.7	95.0	91.5	118.5
10.0	87.8	89.6	91.2	92.6	94.7	96.8	98.0	98.0	96.3	93.3	89.9	117.6
12.5	87.3	88.7	90.5	92.0	93.8	96.6	97.0	96.6	94.7	92.0	88.0	116.5
16.0	86.4	87.9	89.4	91.5	93.3	95.4	95.9	95.6	93.5	91.0	86.4	115.0
20.0	84.7	86.4	88.3	90.1	92.0	94.0	94.3	93.6	91.9	89.1	83.6	114.1
25.0	83.6	85.6	87.3	89.3	91.1	92.5	93.0	91.7	90.6	87.5	82.4	112.0
31.5	81.9	83.8	86.2	87.9	90.4	91.4	91.7	90.4	88.7	85.7	81.2	111.3
40.0	80.1	82.6	84.6	86.4	88.3	89.9	89.8	88.7	86.7	84.2	79.9	109.0
50.0	78.6	79.6	81.4	83.4	86.1	86.9	87.2	86.4	84.5	82.1	80.0	107.3
63.0	75.1	76.8	79.1	81.6	82.9	83.8	84.1	83.3	82.1	80.9	80.9	104.4
80.0	71.2	73.1	75.6	77.1	79.4	80.3	80.7	80.2	79.2	79.1	80.6	101.2
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	103.2	104.1	105.1	106.4	108.1	110.2	112.2	114.6	117.5	120.5	121.3	

OAPWL = 136.0

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 705307 TEST DATE 01/10/77 SCALE RATIO 7.0/1 RUN NUMBER 20074 CONDITION 7403

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	143.1	[illegible]	KG/S	64.9	56.7
P.R.		1.67	1.69		1.67	1.69	THRUST,IDL	LB			N		
TEMP	(R)	982.0	994.0	(K)	545.6	552.2	THRUST,MEA	LB		0.0	N		0.0
RHO	LB/FT3	0.047	0.046	KG/M3	0.750	0.743	AREA (MOD)	SQFT			SQM		
VEL	FPS	1269.4	1291.0	M/S	386.9	393.7	W (MODEL)	LB/S	2.9	2.6	KG/S	1.3	1.2

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	62.0	63.4	65.2	66.4	67.4	68.8	70.4	73.2	75.9	76.6	79.0
63	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
80	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
100	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
125	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
160	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
200	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
315	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
400	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
630	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
800	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1600	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3150	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6300	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OASPL	79.5	81.0	82.4	83.8	85.3	87.0	88.3	90.0	91.6	92.6	89.8
PNL	85.3	87.7	89.7	91.5	93.2	96.6	95.0	96.5	94.6	96.3	89.0

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
400. SIDELINE											
PNL	98.2	100.5	102.4	104.2	105.9	107.4	107.8	107.4	106.6	104.9	100.7
2000. SIDELINE											
PNL	78.6	80.8	82.7	84.4	86.1	87.7	88.6	89.1	88.9	87.5	83.6
4400. SIDELINE											
PNL	69.0	71.3	73.2	74.9	76.5	78.2	79.1	79.7	79.9	[illegible]	73.6
6000. SIDELINE											
PNL	62.9	65.7	67.8	68.7	70.4	71.9	72.9	73.7	74.2	72.8	67.4

THIS PAGE IS BEST QUALITY PRACTICABLE FROM COPY FURNISHED TO DDC

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Reference Exhaust System Tested at Ideally Mixed Conditions Without Engine Secondary Flow Simulation; Configuration 2Am; Condition 7404

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 705307 TEST DATE 01/10/77 SCALE RATIO 7.0/1 RUN NUMBER 70074 CONDITION 7404

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		1.75	1.77		1.75	1.77
TEMP	(R)	1020.0	1017.0	(K)	566.7	565.0
RHO	(LB/FT3)	0.046	0.046	KG/M3	0.730	0.736
VEL	FPS	1345.7	1356.5	M/S	410.2	413.4

		PRIMARY	FAN		PRIMARY	FAN
MASS FLOW	LB/S	0.0	0.0	KG/S	0.0	0.0
THRUST,IDL	LB			N		
THRUST,MEA	LB		0.0	N		0.0
AREA (MOD)	SQFT			SQM		
W (MODEL)	LB/S	3.0	2.7	KG/S	1.4	1.2

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS RAW CORRECTED SPL - (MODEL)

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PWL/B 86-120
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	78.6	81.1	83.6	83.9	84.3	85.0	86.3	89.1	90.8	95.0	99.3	101.3
.125	86.4	84.6	84.7	84.1	85.9	87.4	85.9	89.1	93.2	96.6	99.7	112.6
.160	83.7	86.3	84.4	84.0	84.4	85.2	86.7	88.7	93.7	98.7	102.1	113.0
.200	82.0	83.2	85.0	86.2	87.6	89.3	90.6	92.6	97.9	103.2	105.5	117.6
.250	83.8	84.0	86.0	87.0	88.9	89.9	91.9	95.0	100.1	104.8	107.1	119.2
.315	86.8	86.6	88.0	89.1	89.9	92.1	94.3	98.2	102.8	107.2	111.6	122.3
.400	88.9	89.9	91.3	92.4	94.1	95.8	97.7	101.5	106.3	111.1	114.2	125.7
.500	91.9	91.7	92.1	93.1	94.0	96.1	98.4	102.5	108.7	113.2	112.9	126.9
.630	94.6	93.9	94.2	95.3	95.9	98.1	100.6	104.8	109.8	114.6	115.4	120.5
.800	93.6	94.7	93.8	95.8	96.9	98.4	100.6	105.2	111.0	115.1	113.8	128.6
1.00	94.3	94.4	94.8	95.9	97.8	100.6	102.6	106.2	111.2	115.2	115.4	129.3
1.25	95.6	95.1	96.0	97.0	98.6	100.5	103.1	106.7	110.7	113.6	114.2	120.5
1.60	94.0	95.0	95.8	96.6	98.3	100.6	103.0	106.7	109.0	111.9	112.2	127.2
2.00	93.6	94.1	93.6	96.2	97.8	100.4	102.9	106.6	107.7	109.6	109.5	125.7
2.50	92.2	93.4	94.6	96.1	96.6	100.5	103.2	105.6	106.6	106.8	107.4	129.6
3.15	92.1	93.4	94.5	95.7	98.0	100.5	103.1	105.0	105.2	104.6	104.7	123.6
4.00	92.3	93.4	94.6	96.1	97.9	100.6	103.0	104.4	104.0	102.9	102.0	123.1
5.00	92.2	92.6	94.6	95.7	97.5	99.9	102.3	103.3	102.5	100.9	99.4	127.1
6.30	91.6	92.4	93.7	95.3	97.4	99.7	101.9	102.3	101.1	99.2	97.2	121.3
8.00	90.2	91.9	93.6	94.9	96.9	99.3	101.1	101.4	99.9	97.7	95.5	120.5
10.0	89.3	91.1	92.8	94.2	96.4	98.7	100.7	100.7	98.4	96.1	93.5	119.6
12.5	89.6	90.3	92.1	93.6	95.7	98.2	99.3	98.8	96.8	94.7	91.4	116.6
16.0	87.9	89.5	91.1	93.2	95.6	97.5	98.4	97.7	95.6	93.5	89.4	117.7
20.0	86.4	88.1	89.9	91.9	93.8	96.1	96.7	95.9	94.0	91.7	86.9	120.2
25.0	85.1	87.3	89.0	91.0	92.9	94.5	95.4	94.6	92.7	90.6	85.3	119.9
31.5	83.3	85.4	88.0	89.6	92.1	93.4	94.2	92.5	90.8	88.2	83.4	113.6
40.0	81.7	83.7	86.4	88.0	90.1	92.1	92.2	90.7	88.9	86.7	82.5	111.9
50.0	79.5	81.2	83.8	85.0	87.8	89.1	89.5	88.5	86.5	84.6	82.4	109.3
63.0	76.0	78.4	80.0	82.6	84.3	85.4	86.4	85.4	84.0	84.0	83.2	106.9
80.0	73.1	74.9	77.4	78.5	80.9	82.7	82.9	82.2	81.3	82.5	82.7	103.3
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

OAPWL = 136.2

OASPL	105.0	105.0	106.0	108.2	109.9	112.2	114.3	116.6	119.7	123.6	123.6

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 705307 TEST DATE 01/10/77 SCALE RATIO 7.0/1 RUN NUMBER 70074 CONDITION 7404

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		1.75	1.77		1.75	1.77
TEMP	(R)	1020.0	1017.0	(K)	566.7	565.0
RHO	LB/FT3	0.046	0.046	KG/M3	0.730	0.736
VEL	FPS	1345.7	1356.5	M/S	410.2	413.4

		PRIMARY	FAN		PRIMARY	FAN
MASS FLOW	LB/S	148.5	130.3	KG/S	67.1	59.3
THRUST,IDL	LB			N		
THRUST,MEA	LB		0.0	N		0.0
AREA (MOD)	SQFT			SQM		
W (MODEL)	LB/S	3.0	2.7	KG/S	1.4	1.2

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	64.3	66.6	66.6	67.6	68.5	70.3	71.8	74.6	77.6	79.0	80.0
63	66.6	68.1	69.9	71.1	72.7	74.6	75.7	77.9	81.1	83.7	83.6
80	68.6	69.9	70.7	73.0	72.6	74.3	75.9	78.9	83.5	85.0	82.6
100	71.9	72.0	72.7	73.9	74.6	76.2	77.9	81.6	84.6	87.6	86.2
125	70.9	72.0	72.3	74.6	75.6	76.5	77.9	81.6	85.6	87.5	87.6
160	71.3	72.3	73.2	74.6	76.2	78.3	79.5	82.3	85.7	87.3	83.9
200	72.3	73.6	73.8	74.8	76.9	77.6	80.3	82.8	86.6	86.9	83.3
250	71.1	72.6	74.1	75.0	76.6	78.6	80.1	82.3	82.3	84.8	82.7
315	69.6	71.7	73.0	74.6	75.6	78.0	79.7	81.6	81.6	80.6	77.0
400	68.9	70.9	72.5	74.2	75.9	78.0	79.9	81.1	80.6	78.0	74.5
500	68.5	70.6	72.2	73.0	75.7	77.3	79.3	80.2	78.0	75.6	71.2
630	68.5	70.1	72.1	73.7	75.7	77.6	79.3	77.3	75.2	72.8	67.8
800	68.0	69.2	71.1	73.0	74.6	76.5	78.1	77.0	75.0	70.5	64.1
1000	67.1	68.6	70.6	72.1	74.1	75.8	77.2	76.2	72.9	67.9	60.6
1250	65.8	67.6	69.6	71.3	73.1	75.0	75.7	74.7	71.0	65.5	57.5
1600	64.6	66.5	68.6	70.0	72.1	74.0	73.9	72.7	68.3	62.5	53.2
2000	62.6	64.6	66.6	68.7	70.6	72.3	72.1	70.6	65.5	59.3	48.7
2500	59.7	62.5	64.8	67.1	68.7	70.5	70.2	67.6	62.6	55.9	43.6
3150	56.7	59.8	62.3	64.6	66.2	67.8	67.6	64.6	58.9	51.3	38.6
4000	53.6	57.1	59.5	62.1	63.6	65.0	64.6	61.5	54.9	46.3	29.6
5000	50.8	54.6	58.1	60.0	62.2	62.6	61.7	57.6	51.6	42.3	25.1
6300	46.8	50.7	54.5	56.6	58.2	59.1	57.3	52.7	46.1	35.6	16.6
8000	41.7	45.6	49.6	51.0	53.6	53.5	51.7	47.1	39.3	27.9	6.6
10000	32.2	38.0	40.8	43.1	44.3	44.3	41.6	38.1	27.6	16.6	0.0
OASPL	81.6	82.6	84.1	85.6	87.1	88.9	90.6	92.6	93.6	95.0	97.0
PNL	87.2	89.6	91.6	93.3	95.0	96.7	97.3	97.5	97.3	96.3	92.4

400. SIDELINE

PNL	100.0	102.2	104.1	106.0	107.7	109.5	110.1	109.5	108.9	107.8	103.9

2000. SIDELINE

PNL	80.5	82.7	84.5	86.3	87.9	89.7	90.9	91.3	91.3	90.5	86.2

4000. SIDELINE

PNL	71.0	73.2	75.0	76.7	78.3	80.1	81.3	81.9	82.6	81.8	76.9

6000. SIDELINE

PNL	65.1	67.2	68.9	70.6	72.2	74.0	75.2	76.0	76.0	76.0	70.7

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Reference Exhaust System Tested at Ideally Mixed Conditions Without Engine Secondary Flow Simulation; Configuration 2Am; Condition 7405

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 705307 TEST DATE 01/10/77 , SCALE RATIO 7.0/1 RUN NUMBER 2x074 CONDITION 7405

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		1.79	1.80		1.79	1.80	THRUST,IDL	LB			N		
TEMP	(R)	1039.0	1036.0	(K)	577.2	575.6	THRUST,MEA	LB		0.0	N		0.0
RHO	LB/FT3	0.045	0.045	KG/M3	0.722	0.724	AREA (MOD)	SQFT			SQM		
VEL	FPS	1388.6	1388.9	M/S	423.2	423.3	W (MODEL)	LB/S	3.1	2.6	KG/S	1.4	1.2

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (NOLOSS)

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	POWER 60-120
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	78.9	81.0	84.2	84.5	84.9	85.9	87.2	89.6	91.2	95.5	100.0	111.0
.125	81.2	83.4	84.9	84.7	84.8	88.2	86.9	89.9	94.6	97.1	100.7	113.3
.160	84.0	87.2	85.1	85.4	85.1	86.0	87.5	89.7	94.5	99.7	102.9	114.7
.200	83.4	83.9	86.1	87.1	88.4	90.1	91.4	93.5	98.0	103.9	106.5	116.4
.250	85.6	85.0	87.1	88.9	89.0	90.7	92.0	96.0	101.1	106.0	108.4	120.4
.315	87.4	87.1	88.7	90.0	90.9	93.0	95.3	99.2	103.7	108.2	112.5	123.3
.400	89.6	90.0	91.9	93.2	94.9	96.5	98.6	102.5	107.6	112.1	115.3	126.7
.500	92.0	92.5	93.0	94.6	94.0	97.2	99.5	103.7	110.0	114.4	114.0	126.6
.630	95.3	94.7	95.6	96.3	96.8	99.6	101.6	106.1	111.6	115.9	116.6	129.0
.800	94.4	95.6	94.8	96.8	98.0	99.3	101.5	106.3	112.3	116.5	115.0	130.1
1.00	95.5	95.5	95.9	97.6	98.9	101.5	103.6	107.6	112.9	116.7	116.0	130.0
1.25	98.4	96.4	97.2	98.3	100.6	101.7	104.4	108.0	117.5	115.5	115.0	130.7
1.60	95.9	96.8	97.3	98.0	99.5	101.8	104.3	107.4	110.9	114.4	114.5	129.0
2.00	94.9	95.6	96.4	97.5	99.1	101.6	104.3	107.4	104.5	111.0	112.2	127.7
2.50	93.7	94.0	95.6	97.3	99.0	101.6	104.3	106.9	108.3	109.5	110.2	126.5
3.15	93.5	94.7	95.5	96.8	98.9	101.5	104.2	106.2	106.6	107.1	107.6	125.3
4.00	93.3	94.4	95.5	96.9	98.9	101.5	104.2	105.7	105.4	105.1	104.7	124.5
5.00	93.1	93.6	94.9	96.5	98.5	101.0	103.3	104.4	103.0	102.9	101.9	123.3
6.30	92.5	93.3	94.6	96.3	98.3	100.7	102.8	103.5	102.6	101.1	99.3	122.5
8.00	91.6	92.6	94.2	95.9	98.6	100.4	102.0	102.4	101.0	99.2	97.5	121.0
10.0	90.2	92.0	93.7	95.3	97.4	99.0	101.2	101.2	99.5	97.6	95.3	120.6
12.5	89.7	91.1	93.6	94.8	96.5	99.1	100.3	99.8	98.6	96.2	92.9	119.0
16.0	88.7	90.2	91.9	94.1	96.1	98.5	99.4	98.6	96.6	94.9	90.9	116.9
20.0	86.9	88.8	90.9	92.7	94.7	96.0	97.5	96.7	94.8	92.0	88.2	117.0
25.0	85.7	87.9	90.0	92.0	93.8	95.4	96.3	94.9	93.7	91.2	86.5	115.0
31.5	83.9	86.0	88.7	90.3	93.1	94.3	95.1	93.4	91.9	89.3	85.0	114.5
40.0	82.3	84.2	87.2	88.9	91.1	92.9	93.6	91.6	89.8	87.8	83.3	112.7
50.0	80.2	82.6	84.6	85.9	89.6	90.1	90.4	89.4	87.6	86.0	83.0	110.3
63.0	77.5	79.0	81.9	83.4	85.3	86.7	87.8	86.5	85.0	84.7	83.7	107.4
80.0	73.7	75.4	78.2	79.2	81.7	83.6	84.0	83.2	82.2	83.6	83.1	104.1
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	106.2	106.9	107.8	109.2	110.9	113.2	115.4	117.9	121.2	124.6	125.1	OAPWL = 139.7

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 705307 TEST DATE 01/10/77 SCALE RATIO 7.0/1 RUN NUMBER 2x074 CONDITION 7405

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	153.9	129.6	KG/S	69.8	58.7
P.R.		1.79	1.80		1.79	1.80	THRUST,IDL	LB			N		
TEMP	(R)	1039.0	1036.0	(K)	577.2	575.6	THRUST,MEA	LB		0.0	N		0.0
RHO	LB/FT3	0.045	0.045	KG/M3	0.722	0.724	AREA (MOD)	SQFT			SQM		
VEL	FPS	1388.6	1388.9	M/S	423.2	423.3	W (MODEL)	LB/S	3.1	2.6	KG/S	1.4	1.2

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	64.9	65.3	67.3	68.7	69.5	71.2	72.0	75.7	78.5	80.0	81.7
63	67.3	68.0	70.5	71.9	73.5	74.7	76.1	78.9	82.4	84.7	84.5
80	70.1	70.7	71.6	72.7	73.4	75.4	77.6	80.1	84.0	87.6	83.2
100	70.6	70.8	73.5	74.9	75.3	77.1	78.9	82.3	86.0	88.3	85.4
125	71.7	73.7	73.3	75.4	76.5	77.4	78.8	82.5	86.9	88.9	87.8
160	72.7	73.6	74.3	75.5	77.3	79.4	81.0	83.7	87.4	88.8	85.3
200	73.6	74.3	75.6	76.8	78.4	79.6	81.6	84.1	87.0	87.6	84.3
250	73.0	74.0	75.6	76.4	77.8	79.0	81.4	83.3	85.2	86.3	82.7
315	71.7	73.2	74.4	75.7	77.1	79.2	81.1	83.0	83.4	83.2	79.7
400	70.4	72.3	73.7	75.4	76.9	79.1	81.0	82.4	82.1	80.7	77.3
500	69.9	71.9	73.2	74.7	76.6	78.7	80.6	81.4	80.6	77.9	74.1
630	69.5	71.4	73.0	74.5	76.4	78.5	80.4	80.6	78.5	75.4	70.5
800	68.9	70.2	72.0	73.8	75.6	77.6	79.1	78.9	76.3	72.5	66.0
1000	67.8	69.5	71.3	73.1	75.0	76.9	78.1	77.4	74.2	69.8	62.7
1250	65.8	66.5	70.4	72.3	74.2	76.1	76.0	75.7	77.1	67.0	59.5
1600	64.1	66.9	69.2	71.0	72.9	74.7	75.1	73.5	69.4	63.8	55.0
2000	62.7	65.2	67.7	69.5	71.2	73.2	73.3	71.1	66.7	60.8	50.2
2500	60.5	63.2	65.6	68.0	69.8	71.5	71.2	68.5	63.6	57.3	44.9
3150	57.2	60.5	63.3	65.4	67.1	68.5	67.8	64.9	59.7	52.4	37.9
4000	54.0	57.7	60.7	63.0	64.5	65.2	64.6	60.8	55.0	47.0	30.6
5000	51.4	55.2	58.8	60.7	63.2	63.5	62.6	58.3	52.7	43.4	26.2
6300	47.4	51.2	55.3	57.3	59.2	59.9	58.1	53.6	47.0	36.9	16.0
8000	42.4	46.4	50.2	51.9	54.6	54.5	52.6	48.0	40.4	29.1	7.2
10000	32.9	37.4	41.9	43.9	45.3	45.1	43.0	37.2	28.0	14.7	0.0
OASPL	82.6	84.0	85.2	86.6	88.1	90.0	9 .5	93.3	95.4	96.6	93.4
PNL	88.2	90.4	92.4	94.3	96.0	97.7	98.3	98.7	98.0	98.2	93.9
400. SIDELINE PNL	100.9	103.0	105.0	106.9	108.7	110.5	111.1	110.6	110.4	109.6	105.6
2000. SIDELINE PNL	81.9	83.9	85.6	87.3	89.6	90.8	92.0	92.5	92.9	92.3	88.0
4000. SIDELINE PNL	72.5	74.6	76.1	77.8	79.4	81.2	82.4	83.2	84.3	83.0	78.0
6000. SIDELINE PNL	66.5	68.6	70.1	71.7	73.3	75.1	76.3	77.4	78.6	78.1	72.5

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Reference Exhaust System Tested at Ideally Mixed Conditions Without Engine Secondary Flow Simulation; Configuration 2Am; Condition 7406

a.) Model Data Measured At 15 Ft. Radius

```
STAND X206   RIG ID 705307   TEST DATE 01/10/77   SCALE RATIO   7.0/1   RUN NUMBER 20074  CONDITION 7406
                PRIMARY   FAN            PRIMARY  FAN                          PRIMARY  FAN          PRIMARY  FAN
AREA   SQFT                     SQM                     MASS FLOW  LB/S      0.0     0.0   KG/S    0.0    0.0
P.R.          1.06     1.00             1.06    1.00    THRUST,IDL  LB                     N
TEMP    (R) 1041.0   1041.0      (K)  606.1   606.1    THRUST,MEA  LB          0.0         N             0.0
RHO  LB/FT3  0.043    0.043   KG/M3  0.693   0.695    AREA (MOD) SQFT                    SQM
VEL     FPS 1463.2   1476.4     M/S  446.0   450.0    W (MODEL)  LB/S      3.2      2.0   KG/S    1.4    1.3
```

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (MODEL)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	POWER (RE-12W)
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	74.9	82.9	85.3	85.5	86.0	87.3	88.3	90.6	92.0	96.3	100.8	112.0
.125	82.5	86.0	85.9	86.1	87.5	89.1	87.6	90.7	94.9	98.0	101.4	114.2
.160	85.5	88.0	88.1	88.1	85.6	87.0	88.4	90.4	95.0	100.6	103.4	115.6
.200	85.0	85.3	87.0	88.2	89.6	91.1	92.4	94.5	100.1	104.9	107.6	119.5
.250	85.0	86.9	87.8	89.7	90.5	91.8	93.8	96.9	102.5	107.6	109.2	121.4
.315	88.3	88.7	90.0	91.1	91.9	93.9	96.6	100.1	104.7	109.1	113.3	124.2
.400	91.3	92.6	93.5	94.6	95.9	97.7	99.7	103.7	108.7	113.6	115.7	127.7
.500	93.5	94.0	93.9	94.8	95.9	98.1	100.6	104.7	111.2	115.4	115.6	129.1
.630	94.7	96.1	95.9	97.0	97.8	99.8	102.4	107.3	112.8	116.9	117.3	130.4
.800	95.8	96.5	95.9	97.9	98.6	100.4	102.6	107.8	114.6	117.5	115.8	131.3
1.00	96.8	96.9	97.0	98.2	100.3	102.7	105.0	109.1	114.9	118.0	117.6	132.2
1.25	97.5	97.6	98.4	99.4	101.1	102.9	105.5	109.6	114.8	117.2	117.0	131.4
1.60	97.6	98.4	98.6	99.4	100.9	103.2	105.4	109.0	113.1	116.4	116.7	131.6
2.00	96.8	97.2	98.1	98.8	100.6	103.0	105.6	108.7	111.6	114.5	114.4	129.7
2.50	95.8	96.4	97.3	98.6	100.5	103.2	105.6	108.3	110.3	112.3	113.6	126.5
3.15	95.3	96.4	97.1	98.2	100.5	103.1	105.7	107.7	108.4	110.6	110.8	127.3
4.00	95.6	95.8	96.7	98.3	100.1	102.8	105.6	106.9	107.1	108.0	108.0	126.2
5.00	94.7	94.9	96.1	97.8	99.6	102.4	104.6	105.7	105.6	105.4	105.4	125.6
6.30	94.2	94.8	94.6	97.8	99.7	102.7	104.4	104.9	104.1	104.0	103.2	124.2
8.00	92.8	94.2	95.8	97.2	99.2	101.6	103.5	103.8	102.7	102.4	102.1	123.2
10.0	91.8	93.4	95.6	96.7	98.6	101.3	102.8	102.6	101.3	100.5	99.5	122.3
12.5	91.1	92.5	94.4	96.0	98.0	100.6	101.0	101.0	99.6	99.0	96.8	121.1
16.0	90.2	91.6	93.2	95.4	97.3	99.8	100.6	100.0	98.4	97.5	94.6	120.1
20.0	88.5	90.1	92.6	94.0	95.9	98.3	98.6	97.9	96.6	95.4	91.9	118.4
25.0	87.2	89.2	91.7	93.2	94.9	96.0	97.5	96.1	95.4	93.0	90.1	117.1
31.5	85.0	87.6	90.2	91.9	94.4	95.9	96.3	94.9	93.6	91.9	88.6	116.0
40.0	84.9	86.2	88.5	90.9	92.9	94.6	95.0	93.6	92.0	90.7	87.3	114.7
50.0	82.8	84.5	86.9	88.5	91.2	92.5	92.8	91.8	90.6	89.5	87.5	112.0
63.0	80.8	82.0	84.6	86.6	88.3	89.9	90.5	89.6	88.7	89.2	88.5	110.0
80.0	77.6	79.2	81.9	83.3	85.6	87.7	87.8	87.0	86.8	88.4	88.9	108.3
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	107.7	108.4	109.1	110.5	112.2	114.5	116.7	119.2	123.1	126.1	126.3	

OAPWL = 141.2

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

```
STAND X206   RIG ID 705307   TEST DATE 01/10/77   SCALE RATIO   7.0/1   RUN NUMBER 20074  CONDITION 7406
                PRIMARY   FAN            PRIMARY  FAN                          PRIMARY  FAN          PRIMARY  FAN
AREA   SQFT                     SQM                     MASS FLOW  LB/S    154.0   135.2  KG/S   70.    61.3
P.R.          1.06     1.00             1.06    1.00    THRUST,IDL  LB                     N
TEMP    (R) 1041.0   1041.0      (K)  606.1   606.1    THRUST,MEA  LB          0.0         N             0.0
RHO  LB/FT3  0.043    0.043   KG/M3  0.693   0.695    AREA (MOD) SQFT                    SQM
VEL     FPS 1463.2   1476.4     M/S  446.0   450.0    W (MODEL)  LB/S      3.2      2.0   KG/S    1.4    1.3
```

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	65.8	66.9	68.6	69.6	70.5	72.1	73.5	76.5	79.5	81.7	82.5
63	68.8	70.8	72.1	73.3	74.5	75.9	77.2	80.1	83.3	85.6	85.4
80	71.0	72.2	72.5	73.5	74.5	76.3	78.1	81.1	84.0	88.0	84.0
100	74.0	74.2	74.4	75.6	76.3	77.9	79.7	83.5	87.4	89.3	86.1
125	73.1	74.6	74.4	76.5	77.3	78.5	79.9	84.0	88.6	89.9	84.6
160	74.6	74.8	75.4	76.7	78.7	80.4	82.2	85.2	89.4	90.1	86.1
200	74.7	75.5	76.8	77.9	79.5	80.8	82.7	85.7	89.3	89.3	85.5
250	74.7	76.2	76.9	77.8	79.2	81.0	82.5	84.9	87.4	88.3	84.4
315	73.6	74.8	76.1	77.6	78.6	80.6	82.4	84.3	85.5	85.9	81.9
400	72.5	73.9	75.2	76.7	78.4	80.7	82.5	83.8	84.1	83.5	80.1
500	71.7	73.6	74.8	76.1	76.6	80.3	82.1	82.9	82.0	80.8	77.3
630	71.2	72.8	74.2	75.9	77.6	79.8	81.8	81.8	80.2	78.3	73.8
800	70.5	71.5	73.2	75.1	76.9	79.6	80.6	80.2	78.1	75.5	70.1
1000	69.5	71.0	72.7	74.6	76.4	78.4	79.7	78.8	75.9	72.7	66.6
1250	67.6	69.9	71.8	73.6	75.4	77.5	78.3	77.1	73.8	70.2	64.1
1600	65.7	68.3	70.5	72.4	74.1	76.2	76.7	74.9	71.2	66.7	59.2
2000	64.1	66.6	69.1	70.9	72.7	74.7	74.6	72.3	68.3	63.6	54.1
2500	62.0	64.6	66.9	69.3	71.0	72.8	72.4	69.9	65.4	59.9	48.6
3150	58.8	61.6	64.4	66.7	68.3	70.6	68.9	66.1	61.5	55.6	41.6
4000	55.5	59.0	61.9	64.2	65.6	66.6	65.8	62.8	57.5	49.4	34.2
5000	53.1	56.8	60.3	62.3	64.5	65.1	63.8	59.8	54.4	46.0	29.8
6300	49.5	53.2	57.0	59.3	61.0	61.6	60.1	55.6	49.2	39.8	20.6
8000	45.6	48.9	52.5	54.5	56.8	56.9	55.8	50.4	43.4	32.6	11.7
10000	36.2	40.4	44.6	47.5	48.3	48.3	45.9	40.3	31.7	19.2	0.0
OASPL	84.1	85.4	86.5	87.9	89.4	91.3	92.8	94.7	97.2	98.1	94.6
PNL	89.9	91.9	93.8	95.7	97.3	99.1	99.7	100.1	100.0	100.1	95.7
400. SIDELINE PNL	102.6	104.5	106.4	108.3	110.0	111.9	112.4	112.6	112.4	111.7	107.5
2000. SIDELINE PNL	83.6	85.5	87.0	88.7	90.4	92.2	93.3	94.0	94.9	94.3	89.6
40[illegible]. SIDELINE PNL	74.2	76.1	77.5	79.2	80.8	82.7	83.9	84.0	86.3	85.7	80.4
6600. SIDELINE PNL	68.3	70.2	71.5	73.1	74.7	76.5	77.7	78.9	80.8	80.6	74.6

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Reference Exhaust System Tested at Ideally Mixed Conditions Without Engine Secondary Flow Simulation; Configuration 2Am; Condition 7407

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 765307 TEST DATE 01/10/77 SCALE RATIO 7.0/1 RUN NUMBER [illegible] CONDITION 7407

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		1.97	1.97		1.97	1.97
TEMP	(R)	1127.6	1132.6	(K)	626.1	628.9
RHO	LB/FT3	0.042	0.042	KG/M3	0.681	0.678
VEL	FPS	1547.6	1551.0	M/S	471.7	473.0

MASS FLOW LB/S; THRUST-IDL LB; THRUST-MEA LB; AREA (MOD) SQFT; # (MODEL) LB/S — [illegible]

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (NOCALC)

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	POWER 10-12W
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	81.1	84.1	86.1	86.7	87.5	[illegible]	89.6	91.5	93.2	97.6	101.0	[illegible]
.125	83.6	87.1	86.6	87.6	89.3	89.6	88.5	91.9	96.6	99.2	[illegible]	[illegible]
.160	86.6	89.3	87.3	87.8	87.3	87.9	89.4	91.3	97.4	101.5	102.7	[illegible]
.200	86.3	88.8	88.5	90.6	91.1	92.1	93.9	95.7	101.2	106.0	106.7	[illegible]
.250	87.6	88.5	89.5	91.0	91.7	92.8	95.1	97.4	103.4	108.1	110.6	[illegible]
.315	88.9	90.1	91.3	92.6	93.5	95.2	97.4	101.5	105.8	110.1	114.3	[illegible]
.400	94.1	95.1	95.6	96.7	97.6	98.6	100.9	105.0	110.2	114.2	117.7	[illegible]
.500	94.9	95.7	95.4	96.5	97.4	99.5	102.0	106.7	112.0	117.0	118.1	[illegible]
.630	97.9	97.2	97.6	98.0	99.5	101.0	103.9	109.1	114.6	118.2	118.2	[illegible]
.800	97.0	97.1	97.5	99.5	100.4	101.7	104.3	109.9	115.9	119.2	117.3	[illegible]
1.00	98.6	98.3	98.4	99.6	101.9	104.1	106.5	111.3	117.1	119.7	118.9	[illegible]
1.25	99.3	99.4	99.6	101.2	102.9	104.9	107.2	111.5	117.4	119.8	118.3	[illegible]
1.60	100.1	99.9	100.0	101.1	102.5	104.9	107.2	111.0	116.2	119.4	118.2	[illegible]
2.00	99.6	99.1	99.7	101.2	102.3	104.5	107.6	110.0	114.7	118.2	117.0	[illegible]
2.50	98.2	98.3	99.2	100.8	102.5	104.7	107.7	110.4	113.1	116.5	116.5	[illegible]
3.15	97.7	98.2	98.0	100.4	102.9	104.8	107.8	109.0	111.6	114.0	114.2	[illegible]
4.00	96.8	97.4	98.4	100.2	102.1	104.6	107.5	109.1	110.0	112.6	111.9	[illegible]
5.00	96.2	96.7	97.0	99.8	101.0	104.2	106.8	107.6	108.7	110.6	109.4	[illegible]
6.30	95.7	96.5	97.7	99.7	101.7	104.1	106.5	107.0	107.3	108.9	107.4	[illegible]
8.00	94.7	96.1	97.4	99.1	101.2	103.6	105.7	105.0	105.5	107.6	106.5	[illegible]
10.0	93.6	95.5	96.9	98.7	100.9	103.6	104.9	104.6	104.3	105.8	104.6	[illegible]
12.5	92.7	94.6	96.1	98.1	100.1	102.4	103.6	103.1	102.3	101.6	101.7	[illegible]
16.0	92.0	93.5	95.3	97.9	99.6	101.7	102.7	102.1	101.2	102.0	99.8	[illegible]
20.0	90.3	92.6	94.3	96.7	98.5	100.4	101.0	100.3	99.5	100.2	97.6	[illegible]
25.0	89.2	91.7	93.8	96.1	97.3	99.1	100.0	98.5	98.6	98.6	95.7	[illegible]
31.5	87.7	90.0	92.6	94.8	97.2	98.3	98.9	97.2	96.8	96.8	94.0	[illegible]
40.0	86.2	88.5	91.7	93.5	95.6	97.1	97.4	95.9	95.2	95.4	92.3	[illegible]
50.0	84.1	86.9	89.0	90.8	93.6	94.7	95.1	93.8	93.2	93.3	90.8	[illegible]
63.0	81.7	83.5	86.3	88.5	90.5	91.6	92.3	91.2	90.9	91.6	90.1	[illegible]
80.0	77.8	79.9	82.7	86.5	87.3	88.5	88.6	87.1	88.1	89.2	88.9	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	109.7	110.6	110.8	112.4	114.1	116.2	118.6	121.1	125.5	128.5	128.1	

OAPWL = 143.3

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 765307 TEST DATE 01/10/77 SCALE RATIO 7.0/1 RUN NUMBER [illegible] CONDITION 7407

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		1.97	1.97		1.97	1.97
TEMP	(R)	1127.6	1132.6	(K)	626.1	628.9
RHO	LB/FT3	0.042	0.042	KG/M3	0.681	0.678
VEL	FPS	1547.6	1551.0	M/S	471.7	473.0

MASS FLOW LB/S; THRUST-IDL LB; THRUST-MEA LB; AREA (MOD) SQFT; # (MODEL) LB/S — [illegible]

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	66.4	68.3	69.9	71.3	72.1	73.4	74.9	77.9	80.6	82.7	81.5
63	71.6	73.5	74.2	75.4	76.2	76.8	78.6	81.4	85.0	86.0	86.4
80	72.6	73.9	74.0	75.2	76.0	77.7	79.5	82.6	87.6	89.6	85.3
100	75.2	75.3	75.5	76.6	78.0	79.1	81.2	85.3	89.2	90.6	87.0
125	75.1	75.2	76.0	78.1	78.9	79.8	81.6	86.1	90.5	91.6	86.1
160	75.8	76.7	76.8	78.3	80.3	82.0	83.7	87.4	91.6	91.8	87.4
200	76.7	77.3	78.0	79.7	81.3	82.8	84.4	87.6	91.4	91.7	86.8
250	77.2	77.7	78.3	79.5	80.8	82.7	84.3	86.9	90.5	91.3	86.4
315	76.2	76.7	77.7	79.4	80.3	82.1	84.4	86.4	88.6	89.6	84.5
400	76.9	75.8	77.1	78.9	80.4	82.2	84.4	85.9	86.9	87.7	83.6
500	76.3	75.4	76.5	78.3	80.3	82.8	84.2	85.8	85.8	85.4	80.7
630	73.6	74.4	75.4	77.8	79.6	81.6	83.7	84.0	83.1	82.9	77.7
800	72.6	73.3	74.9	77.1	78.9	80.8	82.6	82.3	81.2	80.2	74.1
1000	71.0	72.7	74.4	76.5	78.4	80.3	81.8	80.9	79.1	77.6	70.8
1250	69.5	71.6	73.6	75.5	77.4	79.3	80.5	79.1	76.6	75.4	68.5
1600	67.5	70.4	72.4	74.4	76.4	77.9	78.8	76.9	76.2	72.0	64.3
2000	65.7	68.5	70.8	73.0	74.8	76.5	76.6	74.4	71.0	68.2	59.0
2500	63.0	66.5	69.0	71.8	73.3	74.7	74.5	72.0	68.2	64.4	55.0
3150	60.6	64.1	66.7	69.4	70.9	72.1	71.3	68.5	64.4	59.8	47.1
4000	57.5	61.5	64.5	67.1	68.4	68.9	68.3	64.4	60.7	54.6	39.8
5000	55.2	59.2	62.7	65.2	67.3	67.5	66.4	62.1	57.0	50.9	35.2
6300	51.3	55.5	59.3	61.9	63.5	64.1	62.5	57.9	52.6	44.5	25.8
8000	46.3	50.8	54.6	56.8	59.2	59.1	57.3	52.4	46.0	36.4	15.0
10000	37.1	41.9	46.3	49.0	50.5	50.0	47.7	41.9	33.9	21.6	0.0
OASPL	86.1	87.0	88.0	89.8	91.3	92.9	94.6	96.6	99.6	100.3	96.2
PNL	92.1	[illegible]	95.7	97.9	99.5	101.0	101.7	102.2	103.5	103.3	98.1
400. SIDELINE PNL	104.4	106.4	109.3	110.6	112.2	113.7	114.5	114.1	115.0	115.0	[illegible]
2000. SIDELINE PNL	85.8	87.3	88.9	90.8	92.4	94.0	95.3	96.0	97.6	97.3	91.8
4000. SIDELINE PNL	76.5	77.9	79.4	81.3	82.8	84.4	85.8	86.8	89.0	88.5	82.3
6000. SIDELINE PNL	70.6	72.6	73.3	75.2	76.7	78.2	79.7	81.1	83.5	82.0	75.8

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Reference Exhaust System Tested at Ideally Mixed Conditions Without Engine Secondary Flow Simulation; Configuration 2Am; Condition 7408

a.) Model Data Measured At 15 Ft. Radius

```
STAND A206   RIG ID 705307   TEST DATE 01/10/77   SCALE RATIO 7.0/1   RUN NUMBER 20076   CONDITION 7408
                    PRIMARY  FAN                  PRIMARY  FAN                            PRIMARY  FAN        PRIMARY  FAN
AREA   SQFT                             SQM                        MASS FLOW  LB/S       0.0    0.0  KG/S   0.0    0.0
P.R.            2.01    2.02                     2.01    2.02      THRUST,IDL  LB
TEMP   (R)    1155.0  1155.0          (K)       641.7   641.7      THRUST,MEA  LB          0.0        N          0.0
RHO    LB/FT3  0.042   0.042          KG/M3     0.667   0.668      AREA (MOD)  SQ.FT                  SQM
VEL    FPS    1587.0  1595.0          M/S       483.7   486.2      W (MODEL)   LB/S      3.4    2.9  KG/S   1.5    1.3
```

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (ADJUST)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	POWER BEL-LEV
	MICROPHONE ANGLES IN DEGREES											
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	82.0	84.7	87.3	87.6	88.8	90.0	[illegible]	92.3	94.9	98.1	102.7	[illegible]
.125	83.9	87.5	87.1	88.2	90.0	90.2	89.1	92.7	96.5	99.6	103.2	[illegible]
.160	87.2	87.6	87.8	88.6	87.8	88.8	90.9	91.7	97.3	102.1	105.5	[illegible]
.200	87.0	87.6	89.5	90.5	91.5	92.6	94.2	96.0	101.0	106.5	109.2	121.1
.250	88.5	89.1	90.0	91.6	92.4	93.5	95.7	98.6	104.5	108.7	111.0	123.2
.315	89.6	91.1	92.1	93.2	94.3	95.8	98.2	102.0	106.6	111.0	115.2	126.1
.400	90.8	93.9	96.3	97.6	98.1	99.6	101.4	105.5	110.6	[illegible]	118.1	129.5
.500	95.7	96.2	95.9	96.7	97.7	99.9	102.8	106.8	113.6	117.6	116.6	131.2
.630	98.4	97.0	97.5	98.5	99.9	101.4	104.6	109.9	115.3	118.9	118.5	132.9
.800	98.0	97.5	98.1	99.9	101.7	102.2	105.1	110.9	116.9	120.0	117.9	133.9
1.00	99.3	98.9	98.7	100.2	102.5	104.7	107.4	112.2	[illegible]	120.5	119.4	134.8
1.25	100.2	99.9	100.3	101.7	103.6	105.6	108.1	112.7	118.5	120.5	119.0	135.8
1.60	100.6	100.4	100.5	101.5	103.2	105.6	108.2	112.1	117.5	120.5	118.8	134.7
2.00	99.9	99.7	100.5	101.6	103.1	105.2	108.4	111.9	116.2	119.5	117.7	[illegible]
2.50	98.9	99.0	100.6	101.4	103.3	105.5	108.8	111.5	114.9	117.9	117.4	[illegible]
3.15	98.4	98.9	99.5	101.0	103.1	105.5	108.6	110.9	113.3	116.4	115.0	131.8
4.00	97.9	98.3	99.2	100.8	103.1	105.5	108.7	110.2	111.8	114.6	113.0	130.5
5.00	97.7	97.6	98.7	100.5	102.7	104.4	107.4	109.0	110.3	112.4	110.5	129.0
6.30	97.7	97.9	98.7	100.3	102.8	104.8	107.5	108.2	108.9	110.7	108.5	128.1
8.00	96.0	97.3	98.7	100.3	102.4	104.6	106.8	107.0	107.4	109.6	108.1	127.5
10.0	94.0	96.2	98.0	99.8	102.1	104.0	106.1	105.8	106.0	108.0	106.1	126.2
12.5	93.6	93.1	97.1	98.9	101.2	103.4	106.7	104.3	104.3	105.8	103.4	124.6
16.0	92.6	94.5	96.5	98.5	100.6	102.8	103.6	103.3	103.6	104.3	101.5	123.8
20.0	91.0	92.9	95.2	97.3	99.5	101.4	102.2	101.3	101.2	102.2	99.0	122.2
25.0	89.8	92.3	94.5	96.7	98.8	100.2	101.2	99.8	100.3	100.9	97.6	121.2
31.5	88.5	90.7	93.5	95.5	98.3	99.2	99.9	98.5	98.3	99.3	96.2	119.9
40.0	86.8	89.1	92.0	94.3	96.5	98.1	98.6	97.1	96.9	98.2	94.2	118.6
50.0	84.9	87.6	89.9	91.8	94.8	95.7	96.3	95.4	94.9	96.2	93.0	116.5
63.0	82.3	84.1	87.2	89.3	91.5	92.6	93.4	92.7	92.4	94.3	92.4	113.8
80.0	78.6	80.6	83.7	85.4	88.2	89.6	90.0	89.3	89.7	91.9	91.1	110.7
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	110.5	110.9	111.5	113.0	115.0	117.0	119.6	122.3	126.7	129.6	128.7	

CAPWL = [illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

```
STAND A206   RIG ID 705307   TEST DATE 01/10/77   SCALE RATIO 7.0/1   RUN NUMBER 20076   CONDITION 7408
                    PRIMARY  FAN                  PRIMARY  FAN                            PRIMARY  FAN        PRIMARY  FAN
AREA   SQFT                             SQM                        MASS FLOW  LB/S     165.1  141.1  KG/S   [illegible]  64.0
P.R.            2.01    2.02                     2.01    2.02      THRUST,IDL  LB
TEMP   (R)    1155.0  1155.0          (K)       641.7   641.7      THRUST,MEA  LB          0.0        N          0.0
RHO    LB/FT3  0.042   0.042          KG/M3     0.667   0.668      AREA (MOD)  SQ.FT                  SQM
VEL    FPS    1587.0  1595.0          M/S       483.7   486.2      W (MODEL)   LB/S      3.4    2.9  KG/S   1.5    1.3
```

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	67.3	69.3	70.7	71.9	72.9	74.0	75.7	78.4	81.4	81.6	84.4
63	72.3	74.1	74.9	75.7	76.7	77.2	78.9	81.9	85.4	87.2	87.3
80	[illegible]	74.4	74.5	75.4	76.3	78.1	80.3	83.2	88.4	90.2	85.0
100	75.7	75.5	76.0	77.1	78.4	79.5	81.9	86.1	89.9	91.3	87.3
125	75.9	75.6	76.4	78.5	79.7	80.3	82.4	87.1	91.5	97.4	88.7
160	76.5	76.8	77.1	78.7	80.9	82.6	84.6	88.3	92.5	92.6	87.9
200	77.4	77.8	78.7	80.2	82.0	83.5	85.3	88.8	93.0	92.6	87.5
250	77.7	78.2	78.8	79.9	81.5	83.4	85.3	88.0	91.0	92.4	87.0
315	76.7	77.3	78.5	79.6	81.1	82.0	85.2	87.5	90.1	90.9	85.2
400	75.6	76.5	77.9	79.5	81.2	83.0	85.5	87.0	88.7	89.1	84.5
500	74.8	76.1	77.2	78.9	80.8	82.7	85.2	86.1	86.7	87.2	81.5
630	74.1	75.3	76.7	78.4	80.6	82.5	[illegible]	85.1	84.9	84.9	78.8
800	73.5	74.2	75.8	77.8	79.6	81.5	[illegible]	83.5	82.8	82.0	75.2
1000	73.6	74.1	75.4	77.1	79.5	81.0	82.8	82.1	80.7	79.4	71.9
1250	70.8	73.0	74.9	76.7	78.6	80.3	81.6	80.3	76.5	77.6	70.1
1600	68.5	71.1	73.5	75.5	77.6	78.9	80.0	[illegible]	75.9	74.2	65.8
2000	66.6	69.2	71.8	73.8	75.9	77.5	77.7	75.6	73.0	70.4	60.7
2500	64.4	67.3	70.0	72.4	74.3	75.8	75.6	73.2	70.0	66.7	55.5
3150	61.3	64.6	67.6	70.0	71.7	73.1	72.5	69.5	66.1	61.8	48.7
4000	58.2	62.1	65.2	67.7	69.5	70.0	69.5	65.7	62.4	56.7	41.7
5000	55.8	59.9	63.4	65.9	68.4	[illegible]	67.4	63.4	59.1	53.4	37.4
6300	51.9	56.1	60.1	62.7	64.6	65.1	63.7	59.1	54.1	47.3	27.7
8000	47.1	51.4	55.5	57.8	60.4	60.1	58.5	54.0	47.7	39.3	17.2
10000	37.7	42.5	47.2	49.8	51.5	51.0	48.0	43.4	35.4	24.3	0.0
OASPL	86.9	87.7	88.8	90.3	92.1	93.6	95.6	97.7	100.7	101.3	96.8
PNL	92.8	94.5	96.5	98.6	100.4	101.9	102.8	103.5	104.8	104.7	98.8
400. SIDELINE PNL	109.2	107.2	109.2	111.2	113.2	114.7	115.6	115.2	116.4	116.4	111.1
2000. SIDELINE PNL	86.6	88.6	89.7	91.5	93.4	94.8	96.4	97.1	98.9	98.6	92.5
4000. SIDELINE PNL	77.1	78.6	80.7	81.9	83.7	85.2	86.9	88.0	90.3	89.7	83.1
6000. SIDELINE PNL	[illegible]	77.6	[illegible]	75.8	77.5	79.0	80.7	87.3	84.8	83.9	76.4

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Reference Exhaust System Tested at Ideally Mixed Conditions Without Engine Secondary Flow Simulation; Configuration 2Am; Condition 7409

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 70530? TEST DATE 01/10/77 SCALE RATIO 7.0/1 RUN NUMBER 20076 CONDITION 7409

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		2.05	2.06		2.05	2.06	THRUST,IDL	LB			N		
TEMP	(R)	1157.0	1167.0	(K)	642.8	648.3	THRUST,MEA	LB	0.0		N		0.0
RHO	LB/FT3	0.042	0.042	KG/M3	0.669	0.665	AREA (MOD)	SQFT			SQM		
VEL	FPS	1608.7	1626.1	M/S	490.3	495.0	W (MODEL)	LB/S	3.4	2.9	KG/S	1.6	1.3

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (MODEL)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	POWER DE-12W
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	82.3	85.1	87.2	87.5	87.9	89.3	90.4	92.4	94.3	98.2	62.0	1.4.8
.125	86.4	87.9	87.8	88.8	90.5	90.8	89.3	92.7	97.1	100.0	103.8	116.3
.160	87.6	90.2	88.1	88.5	88.6	88.9	90.3	92.1	97.9	102.4	105.8	117.6
.200	87.2	88.1	89.7	91.1	92.6	93.0	94.8	96.3	102.3	107.2	110.6	121.0
.250	88.6	89.3	90.3	92.0	92.6	94.6	96.1	98.9	104.7	109.2	111.6	123.7
.315	90.1	91.6	92.5	93.7	94.7	96.1	98.5	102.6	106.9	111.3	115.3	126.3
.400	95.3	96.4	96.9	97.6	98.4	99.4	101.6	105.8	111.2	115.2	118.8	130.1
.500	95.9	96.6	96.5	97.4	98.2	100.6	103.0	107.1	113.9	118.2	117.1	131.7
.630	98.8	97.0	98.0	98.9	100.3	101.7	104.9	110.8	115.9	119.2	119.1	133.3
.800	98.8	97.9	98.4	100.3	101.5	102.5	105.3	111.1	117.4	120.5	118.3	134.3
1.00	99.6	99.5	99.2	100.7	102.9	10?.6	107.7	112.6	118.7	121.0	119.9	135.6
1.25	100.7	100.3	100.7	102.2	104.0	106.?	108.4	113.0	119.2	120.9	119.3	135.5
1.60	100.9	100.9	100.9	102.0	103.7	106.0	108.4	112.5	118.4	121.0	119.4	135.3
2.00	100.6	100.0	100.6	102.1	103.6	105.6	108.6	112.2	117.0	120.2	118.2	134.4
2.50	99.3	99.5	100.4	102.0	103.7	106.0	109.0	111.8	115.8	118.9	118.0	133.6
3.15	98.9	99.5	100.1	101.5	103.6	106.0	109.3	111.9	114.2	117.4	115.7	132.4
4.00	98.7	98.9	99.0	101.6	103.4	105.9	109.0	110.6	112.7	115.4	113.0	131.1
5.00	100.0	99.4	99.5	101.6	103.1	105.4	108.1	109.5	111.2	113.4	111.1	129.7
6.30	99.5	100.0	100.2	101.2	102.4	105.2	108.0	108.5	110.0	111.9	109.3	128.9
8.00	97.1	98.7	100.0	101.4	102.9	104.9	107.0	107.5	108.5	111.0	108.8	126.6
10.0	95.5	97.3	98.8	100.8	102.6	104.4	106.2	106.2	107.6	109.0	107.0	126.0
12.5	96.4	96.2	98.0	99.8	101.9	104.1	105.3	104.7	105.3	107.1	104.4	125.6
16.0	93.3	95.1	97.0	99.3	101.2	103.3	104.2	103.6	103.9	105.4	102.8	124.5
20.0	91.6	93.9	96.0	98.1	100.1	102.4	102.6	101.8	102.4	103.0	100.2	123.0
25.0	90.6	93.2	95.4	97.4	99.3	100.5	101.5	100.3	101.5	102.5	98.8	121.9
31.5	89.0	91.4	94.2	96.2	98.8	99.0	100.4	98.9	99.7	100.7	97.2	120.7
40.0	87.6	89.9	92.8	95.3	97.3	98.6	99.0	97.6	96.2	99.5	95.4	119.3
50.0	85.6	87.9	90.7	92.4	95.4	96.2	96.9	95.8	96.5	97.6	94.3	118.3
63.0	83.3	85.2	88.0	90.1	92.2	93.3	94.0	93.3	94.1	95.8	93.2	116.7
80.0	79.3	81.8	84.5	86.3	88.9	90.3	90.8	90.0	91.5	93.4	91.8	111.7
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

CAPWL = 144.9

OSPL 108.2 111.5 112.2 113.7 115.6 117.4 119.6 122.6 127.4 130.2 129.3

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 70530? TEST DATE 01/10/77 SCALE RATIO 7.0/1 RUN NUMBER 20076 CONDITION 7409

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	167.6	143.1	KG/S	76.0	64.9
P.R.		2.05	2.06		2.05	2.06	THRUST,IDL	LB	8372.4	7,265	N		
TEMP	(R)	1157.0	1167.0	(K)	642.8	648.3	THRUST,MEA	LB		0.0	N		0.0
RHO	LB/FT3	0.042	0.042	KG/M3	0.669	0.665	AREA (MOD)	SQFT	0.06	0.06	SQM		
VEL	FPS	1608.7	1626.1	M/S	490.3	495.0	W (MODEL)	LB/S	3.4	2.9	KG/S	1.6	1.3

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	67.6	69.6	71.1	72.4	73.3	74.3	76.6	79.6	81.7	83.9	84.5
63	72.8	74.6	75.5	76.3	77.0	77.6	79.1	82.2	86.0	87.6	88.0
80	73.4	74.8	75.1	76.1	76.8	78.8	80.5	83.5	88.7	90.8	86.3
100	76.1	75.9	76.5	77.5	76.8	79.8	82.2	86.3	90.5	91.6	87.9
125	76.1	76.6	76.9	78.9	80.0	80.6	82.6	87.3	92.0	92.9	87.1
160	76.8	77.2	77.0	79.2	81.5	82.9	84.9	88.7	93.2	93.1	88.4
200	77.9	78.2	79.1	80.7	82.4	83.9	85.6	89.1	93.7	93.0	87.6
250	78.0	78.7	79.2	80.4	82.0	83.8	85.5	88.4	92.7	92.9	87.6
315	77.2	77.6	78.8	80.3	81.6	83.2	85.4	87.8	90.9	91.6	85.7
400	76.0	77.0	78.3	80.1	81.2	83.5	85.7	87.?	89.6	90.1	85.1
500	75.3	76.7	77.8	79.4	81.3	83.2	85.5	86.5	87.6	88.2	82.2
630	74.9	7?.8	77.3	79.2	80.9	82.9	83.2	83.5	85.8	83.7	79.4
800	75.0	75.6	76.6	78.3	80.2	82.5	83.9	84.0	83.7	83.0	75.8
1000	74.8	74.2	76.9	78.0	79.6	81.4	83.3	82.4	81.8	80.6	72.7
1250	71.9	74.6	76.2	77.6	79.1	80.6	81.0	80.8	79.6	78.8	70.8
1600	69.4	72.2	74.3	76.5	78.1	79.3	80.1	78.5	76.9	75.7	66.7
2000	67.4	70.3	72.7	74.7	76.6	78.2	78.3	76.6	74.6	71.7	61.7
2500	65.1	68.1	70.7	73.2	74.9	76.3	76.0	73.5	70.9	67.0	56.6
3150	61.9	65.6	68.4	70.8	72.5	73.7	72.9	70.0	67.3	63.4	49.9
4000	58.9	63.0	66.1	68.4	70.0	70.3	69.8	66.2	63.6	56.1	42.9
5000	56.5	60.6	64.3	66.6	68.9	69.8	67.9	63.8	60.5	54.8	38.4
6300	52.5	56.9	60.9	63.5	65.2	65.6	64.1	59.6	55.4	48.6	28.9
8000	47.8	52.3	56.3	58.4	61.6	66.6	59.1	54.4	49.3	40.7	18.5
10000	38.4	43.8	48.8	50.8	52.2	53.7	49.4	44.8	37.3	25.8	0.0
OASPL	87.5	88.3	89.4	90.9	92.5	94.1	95.9	98.0	101.5	101.9	97.3
PNL	93.5	95.4	97.3	99.3	101.0	102.3	103.1	103.7	105.6	105.4	99.4

400. SIDELINE

PNL	106.0	108.6	109.9	112.0	113.7	115.4	115.9	115.5	117.3	117.2	111.0

2000. SIDELINE

PNL	87.2	88.7	90.3	92.3	93.9	95.3	96.7	97.5	99.7	99.3	93.1

4000. SIDELINE

PNL	77.9	79.3	80.8	82.6	84.1	85.6	87.1	88.3	91.0	90.9	83.5

6000. SIDELINE

PNL	71.9	73.3	74.6	75.4	78.0	79.4	81.6	82.6	85.5	84.4	77.1

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Scalloped Long Flowpath Mixer With Engine Secondary Flow Simulation; Configuration 7A; Condition 7501

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG 10 TEST DATE 01/10/77 SCALE RATIO [illegible] RUN NUMBER [illegible] CONDITION 7501

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		1.32	1.39		1.32	1.39
TEMP	[illegible]	1275.6	599.0	(K)	700.3	330.8
RHO	LB/FT3	0.034	0.073	KG/M3	0.541	1.172
VEL	FPS	2000.4	800.2	M/S	331.1	243.9

MASS FLOW LB/S; THRUST,FUL LB; THRUST,MEA LB; AREA (NOZ) SQFT; W (NOZZLE) LB/S — [illegible]

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	67.0	70.9	73.0	74.6	74.4	75.0	76.9	79.9	81.7	84.3	88.4
.125	76.7	75.9	76.1	75.4	76.0	77.1	76.9	79.9	83.8	86.2	88.9
.160	72.0	75.6	76.7	75.3	74.7	75.9	77.1	79.4	83.9	87.0	90.0
.200	71.0	73.4	75.3	76.0	77.3	79.4	80.6	82.0	87.5	91.5	93.2
.250	73.5	75.0	76.0	76.3	76.9	80.3	81.9	85.0	89.0	92.9	94.7
.315	76.2	77.6	78.1	79.3	80.4	82.1	81.0	87.0	91.6	94.6	96.6
.400	77.8	79.5	81.7	[illegible]	83.7	85.7	86.9	89.0	92.5	97.3	98.6
.500	79.9	80.4	80.9	82.5	83.5	85.5	87.0	90.1	94.7	97.7	98.0
.630	80.0	81.0	82.0	83.0	85.0	86.9	88.0	91.0	94.0	98.1	99.3
.800	80.0	81.7	81.9	83.0	85.1	86.7	87.3	91.1	94.0	96.7	95.5
1.00	80.0	81.2	82.3	84.0	85.0	87.5	89.3	91.0	94.1	95.2	94.0
1.25	80.0	81.5	82.0	84.0	85.9	88.0	89.4	91.0	93.0	93.4	90.0
1.60	79.9	81.0	83.1	84.0	86.1	87.0	89.3	91.0	92.8	92.0	88.2
2.00	79.0	81.9	83.1	84.2	86.0	88.0	89.5	91.3	91.0	90.1	86.2
2.50	79.2	81.1	83.5	84.7	87.9	88.4	89.0	90.9	91.2	89.0	85.0
3.15	80.4	82.2	83.0	84.9	86.0	88.9	89.0	90.7	90.3	87.2	84.5
4.00	81.3	82.4	83.0	85.7	87.3	88.9	89.2	90.2	89.0	88.7	83.3
5.00	81.3	81.9	83.4	84.0	86.0	88.1	88.9	89.2	88.2	85.0	81.7
6.30	80.7	81.0	83.2	84.0	86.9	87.9	88.5	88.9	87.1	84.4	80.2
8.00	79.1	81.4	82.9	84.4	86.6	87.7	88.0	87.9	86.9	83.2	79.0
10.0	78.7	80.7	82.3	84.0	86.0	87.0	87.3	86.0	85.0	81.0	77.0
12.5	79.0	80.7	82.9	[illegible]	87.4	88.3	87.2	85.7	83.7	80.5	75.9
16.0	77.6	79.2	81.0	82.0	85.1	85.7	85.0	84.5	82.4	79.1	73.8
20.0	75.0	77.0	79.0	81.3	83.2	84.0	83.9	82.5	80.3	76.7	71.1
25.0	74.0	76.6	78.7	80.2	82.1	82.6	82.4	80.6	78.0	75.1	69.9
31.5	72.4	74.5	77.0	78.0	80.9	81.0	80.7	78.0	76.5	72.0	67.9
40.0	70.3	72.2	74.6	75.3	76.3	78.9	78.5	78.4	74.1	70.6	66.5
50.0	67.0	69.3	71.7	72.7	75.4	75.7	75.3	73.7	71.3	67.0	66.2
63.0	65.4	66.0	66.7	69.0	71.0	72.0	71.0	70.7	68.1	66.0	60.8
80.0	60.0	61.0	64.4	65.4	67.8	68.2	68.1	66.9	65.6	63.4	65.6
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	92.7	94.3	95.7	97.0	99.0	100.3	101.3	102.8	104.5	106.2	107.1

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG 10 TEST DATE 01/10/77 SCALE RATIO 7.071 RUN NUMBER [illegible] CONDITION 7501

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	53.7	55.7	58.7	58.0	59.0	60.3	61.3	63.0	65.0	67.2	67.0
63	55.4	57.7	59.8	61.1	62.5	63.4	64.4	66.2	66.3	69.9	69.0
80	57.4	58.0	59.5	61.2	62.1	63.7	64.5	66.5	69.5	70.3	67.2
100	58.1	59.7	61.3	62.7	63.5	65.0	66.1	67.8	69.4	70.5	68.1
125	57.3	59.0	60.4	62.4	63.6	64.8	65.6	67.3	69.2	69.1	64.3
160	57.2	59.1	60.7	62.5	64.2	65.4	66.5	67.4	68.6	67.3	62.5
200	57.2	59.4	61.2	62.5	64.3	65.9	66.0	67.9	68.3	65.5	59.7
250	57.0	59.4	61.4	62.6	64.6	65.6	66.0	67.5	67.1	63.9	56.4
315	58.4	59.5	61.1	62.4	64.6	65.6	69.3	68.4	65.7	61.5	53.7
400	58.5	59.6	61.4	62.0	65.0	65.9	66.3	66.4	65.0	60.2	52.7
500	58.0	59.4	61.5	62.6	64.5	65.0	66.0	65.9	63.7	58.0	51.0
630	57.5	59.4	61.3	62.0	64.0	65.5	66.0	65.1	64.5	57.0	49.1
800	57.1	58.5	60.5	62.1	63.9	64.7	64.7	63.7	60.7	55.2	46.4
1000	56.0	58.0	59.9	[illegible]	63.6	64.1	63.0	62.4	58.9	53.1	43.6
1250	55.9	57.1	59.1	61.0	64.0	63.4	62.0	61.2	57.4	51.0	41.0
1600	52.6	55.0	57.0	57.7	61.5	61.9	61.2	58.9	54.9	49.0	37.3
2000	52.0	54.8	57.6	59.3	62.1	62.4	60.2	57.0	52.6	45.1	33.7
2500	49.4	52.2	56.7	58.7	58.0	58.7	57.4	58.4	49.9	41.4	27.8
3150	45.9	49.3	51.6	54.0	55.0	55.7	54.2	56.7	45.2	38.3	20.0
4000	42.7	46.4	49.4	51.2	52.0	52.4	50.1	46.5	40.7	30.9	11.5
5000	39.9	43.7	47.1	49.4	51.6	50.2	46.2	43.7	37.3	27.4	4.1
6300	35.4	37.2	42.9	44.7	46.4	45.9	43.0	38.6	31.3	19.7	0.0
8000	30.0	33.7	37.3	38.7	41.0	40.1	37.9	32.3	24.1	11.1	0.0
10000	19.8	24.4	28.2	30.1	31.6	30.4	27.2	21.4	11.1	0.0	0.0
OASPL	68.7	71.6	72.7	74.2	76.1	77.0	77.4	78.1	78.4	77.8	75.3
PNL	75.4	79.2	80.6	82.3	84.5	85.0	84.1	83.6	81.2	77.3	71.5

600. SIDELINE											
PNL	88.4	91.0	93.2	95.0	97.2	97.7	97.0	95.0	93.4	90.1	84.7
2000. SIDELINE											
PNL	68.2	71.1	73.0	75.3	77.5	78.0	77.3	76.7	74.8	70.9	64.0
4000. SIDELINE											
PNL	58.0	61.1	63.3	65.0	67.3	67.7	67.6	67.6	65.2	61.4	55.6
6000. SIDELINE											
PNL	51.3	54.7	57.0	58.6	61.0	61.4	61.3	60.8	59.2	55.3	48.3

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Scalloped Long Flowpath Mixer With Engine Secondary Flow Simulation; Configuration 7A; Condition 7502

a.) Model Data Measured At 15 Ft. Radius

STAND 8206 RIG ID 705307 TEST DATE 07/18/77 SCALE RATIO 7.0/1 RUN NUMBER 2007S CONDITION 7502

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S		0.0	0.0	KG/S	0.0	0.0
P.R.		1.46	1.51		1.46	1.51	THRUST,IDL LB						
TEMP	(R)	1290.0	621.0	(K)	716.7	345.0	THRUST,MEA LB						
RHO	LB/FT3	0.036	0.072	KG/M3	0.560	1.150	AREA (MOD) SQFT						
VEL	FPS	1266.7	908.3	M/S	385.5	276.9	W (MOD) LB/S						

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS RAW CORRECTED SPL - (MODEL)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	POWER DB-17M
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.125	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.160	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.200	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.315	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.400	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.630	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.800	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.60	84.1	85.9	87.6	88.6	90.8	92.7	94.5	97.1	96.7	96.5	95.6	[illegible]
2.00	83.8	86.0	87.3	88.7	93.5	93.0	96.7	96.8	97.7	96.6	92.6	[illegible]
2.50	84.6	86.4	87.7	89.0	92.4	93.4	96.8	96.7	97.0	95.9	91.7	[illegible]
3.15	84.6	86.5	88.0	89.6	91.5	93.3	95.6	96.2	96.6	93.6	90.3	[illegible]
4.00	85.6	86.6	88.0	89.5	91.7	93.6	95.1	95.8	95.1	92.6	89.7	[illegible]
5.00	85.5	86.3	87.8	89.1	91.5	93.1	94.3	94.9	91.9	91.5	87.8	[illegible]
6.30	85.2	86.3	87.6	89.2	91.7	93.1	94.0	94.3	93.6	90.8	86.5	[illegible]
8.00	85.8	86.0	87.5	89.1	91.5	92.9	93.6	93.7	92.2	89.7	86.0	[illegible]
10.0	83.3	85.5	87.0	90.8	93.3	92.6	92.8	92.6	93.2	88.7	84.7	[illegible]
12.5	83.5	85.1	87.1	89.0	91.7	92.5	92.2	91.5	89.0	87.6	83.2	[illegible]
16.0	82.7	84.1	86.0	87.6	90.7	91.3	91.3	90.5	88.7	85.0	81.3	[illegible]
20.0	80.5	82.7	84.5	86.6	88.6	89.5	89.7	88.6	86.5	83.7	78.3	[illegible]
25.0	79.1	81.6	83.6	85.5	87.6	86.7	89.2	86.7	84.9	81.6	76.3	[illegible]
31.5	77.3	79.6	82.0	83.6	86.3	86.7	86.6	85.7	84.0	79.6	74.5	[illegible]
40.0	75.2	77.3	79.9	81.5	83.8	84.6	84.4	82.6	80.3	77.2	72.6	[illegible]
50.0	72.4	74.3	76.8	78.2	82.0	82.5	83.6	79.2	77.4	74.6	72.3	[illegible]
63.0	69.6	70.8	73.7	75.1	77.0	77.4	77.4	76.2	74.0	72.4	72.4	[illegible]
80.0	64.6	66.7	69.4	70.6	73.1	73.0	73.3	72.5	70.8	69.6	71.3	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]

OAPWL = [illegible]

OASPL	97.3	98.8	100.1	101.5	103.8	105.2	106.4	108.2	110.3	112.5	113.6

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND 8206 RIG ID 705307 TEST DATE 07/18/77 SCALE RATIO 7.0/1 RUN NUMBER 2007S CONDITION 7502

		PRIMARY	FAN		PRIMARY	FAN	
AREA	SQFT			SQM			MASS FLOW LB/S
P.R.		1.46	1.51		1.46	1.51	THRUST,IDL LB
TEMP	(R)	1290.0	621.0	(K)	716.7	345.0	THRUST,MEA LB
RHO	LB/FT3	0.036	0.072	KG/M3	0.560	1.150	AREA (MOD) SQFT
VEL	FPS	1266.7	908.3	M/S	385.5	276.9	W (MOD) LB/S

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	57.7	59.0	60.6	62.0	63.6	64.5	65.5	66.1	70.5	72.2	73.2
63	59.6	61.6	64.0	65.2	66.7	67.9	69.8	70.6	73.1	75.6	75.6
80	62.0	63.3	64.3	65.5	66.6	68.1	69.1	71.6	75.3	76.9	73.7
100	64.0	64.9	66.0	66.8	68.2	69.3	70.7	73.1	75.5	77.6	75.6
125	62.3	64.6	65.0	67.0	68.4	68.4	70.6	72.6	75.3	76.4	74.3
160	62.1	63.7	65.1	67.0	69.1	70.2	71.6	73.2	76.0	74.5	76.7
200	61.6	63.0	63.5	66.9	68.9	70.5	71.7	73.6	74.2	72.0	66.7
250	61.2	65.7	65.7	66.8	69.1	70.5	71.6	73.0	73.6	70.4	63.6
315	60.6	63.6	65.3	66.9	69.3	70.6	71.9	72.4	72.6	67.8	60.3
400	60.7	63.9	65.0	67.1	70.3	70.9	71.5	72.2	70.6	66.1	56.0
500	61.0	63.7	65.7	67.3	69.2	70.5	71.6	71.6	69.6	64.6	56.8
630	61.6	63.0	65.9	67.2	69.2	70.6	71.1	70.7	68.2	62.9	55.0
800	61.5	62.9	64.9	66.4	68.6	69.7	70.1	69.6	66.6	61.1	52.5
1000	60.5	62.5	64.3	66.0	68.6	69.1	69.3	68.2	66.0	59.3	49.9
1250	58.6	61.7	63.7	65.5	67.7	68.0	68.2	67.6	63.3	57.5	46.6
1600	57.2	60.6	62.5	64.5	66.6	67.3	66.7	66.7	61.1	54.9	44.6
2000	56.5	59.7	61.0	63.7	66.6	66.0	65.2	62.8	58.5	52.0	40.5
2500	56.0	57.1	59.7	61.7	63.9	64.3	63.1	60.6	55.7	46.2	35.3
3150	50.6	54.4	56.9	59.1	60.8	61.2	60.0	56.8	51.6	43.3	28.0
4000	47.6	51.6	54.3	56.5	58.1	58.0	56.5	52.6	47.0	37.6	20.6
5000	44.8	48.8	52.1	54.2	56.4	55.9	54.1	49.6	43.6	33.7	15.7
6300	40.3	44.3	48.0	49.9	51.9	51.6	49.3	44.6	37.5	26.3	6.1
8000	34.6	38.7	42.4	44.2	46.6	45.9	43.2	38.4	30.2	17.7	0.0
10000	26.6	29.2	33.2	35.6	37.0	35.8	32.8	26.9	17.6	2.4	0.0
OASPL	73.3	75.5	77.2	78.7	80.7	81.8	82.5	83.6	84.3	84.6	81.8
PNL	80.1	82.9	85.2	87.0	89.4	90.0	89.5	88.9	87.5	84.8	79.6

600. SIDELINE

PNL	93.1	95.0	98.6	99.8	102.0	102.8	102.5	101.5	99.5	96.9	92.1

2000. SIDELINE

PNL	72.9	75.8	78.2	80.0	82.3	82.9	82.7	82.5	81.1	78.3	73.0

4000. SIDELINE

PNL	62.7	65.8	67.9	69.6	72.1	72.8	73.0	72.9	71.7	68.9	63.3

6000. SIDELINE

PNL	56.2	59.5	61.7	63.4	65.9	66.6	66.7	66.7	65.0	63.0	57.2

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Scalloped Long Flowpath Mixer With Engine Secondary Flow Simulation; Configuration 7A; Condition 7503

a.) Model Data Measured At 15 Ft. Radius

```
STAND X206   RIG ID 7V5507   TEST DATE 01/18/77   SCALE RATIO 7.0/1   RUN NUMBER 20075   CONDITION 7503
                       PRIMARY    FAN                PRIMARY   FAN                       PRIMARY   FAN
     AREA   SQFT                          SQM                       MASS FLOW  LB/S
     P.R.              1.47      1.56               1.47      1.56  THRUST,IDL  LB
     TEMP   (R)      1325.0     620.0     (K)    736.1     340.9   THRUST,MEA  LB
     RHO   LB/FT3    0.033      0.072    KG/M3   0.534     1.152   AREA (MCD) SQFT
     VEL    FPS     1290.4     935.9     M/S     393.3     285.3   W (MCD)    LB/S
```

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PNLM
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	72.2	75.8	78.1	79.2	79.6	80.4	81.0	84.8	86.6	90.0	94.2	[illegible]
.125	75.9	80.0	80.6	80.6	80.8	82.8	83.7	84.3	88.6	91.6	95.7	[illegible]
.160	77.9	80.2	79.2	80.8	79.9	81.1	82.6	84.9	89.6	94.0	98.1	[illegible]
.200	76.9	78.5	80.7	81.2	[illegible]	83.2	85.8	88.6	93.5	98.1	100.4	[illegible]
.250	70.6	80.7	82.1	83.6	84.1	85.1	87.2	91.6	95.2	99.7	101.6	[illegible]
.315	81.6	82.6	84.0	84.9	86.7	87.6	89.7	93.7	98.1	101.0	104.0	[illegible]
.400	83.8	85.2	87.1	88.5	89.6	91.3	92.9	96.2	101.0	105.0	108.0	[illegible]
.500	86.2	87.6	87.3	88.6	89.9	91.5	93.7	97.8	103.3	106.6	109.0	[illegible]
.630	86.9	88.9	89.4	90.2	91.6	93.6	95.3	99.2	103.4	107.0	109.1	[illegible]
.800	87.8	88.4	88.4	90.2	91.8	93.2	95.8	98.6	103.5	106.8	108.0	[illegible]
1.00	86.0	87.5	88.0	90.3	92.3	94.2	96.0	99.2	102.0	105.0	105.5	[illegible]
1.25	86.3	87.4	83.8	90.2	92.6	94.2	96.4	99.5	101.9	102.2	101.3	[illegible]
1.60	86.2	87.6	89.0	90.2	92.5	94.5	96.5	99.1	100.9	100.7	96.2	[illegible]
2.00	85.6	87.5	88.6	90.5	92.7	94.6	96.5	99.1	99.7	98.3	95.5	[illegible]
2.50	85.8	87.8	89.6	91.0	93.2	95.2	96.9	98.8	99.1	97.1	94.0	[illegible]
3.15	86.3	87.9	89.6	91.2	93.3	95.1	96.8	98.3	98.1	95.4	92.4	[illegible]
4.00	87.3	88.2	89.6	91.6	93.7	95.3	97.0	97.6	97.2	94.6	91.2	[illegible]
5.00	87.5	87.9	89.3	91.3	93.5	95.2	96.6	97.1	96.2	93.5	90.2	[illegible]
6.30	87.2	88.1	89.4	91.5	93.6	95.1	96.7	96.6	95.2	92.9	89.5	[illegible]
8.00	85.9	87.7	89.5	91.2	93.6	95.1	95.6	96.6	94.7	92.1	88.6	[illegible]
10.0	85.5	87.3	88.9	90.9	93.3	94.9	95.1	94.5	93.6	91.1	87.6	[illegible]
12.5	85.3	86.8	88.9	90.6	93.5	94.3	94.5	94.6	92.3	90.1	86.1	[illegible]
16.0	84.5	85.9	86.8	90.2	92.6	93.5	93.5	92.9	91.1	89.8	84.1	[illegible]
20.0	82.3	84.5	86.5	88.5	90.7	93.5	93.5	90.8	88.9	86.6	81.2	[illegible]
25.0	81.1	83.6	85.6	87.7	89.7	90.2	90.7	88.9	87.2	84.5	79.0	[illegible]
31.5	79.0	81.2	83.9	85.7	88.3	88.8	88.7	88.8	84.9	82.1	77.0	[illegible]
40.0	76.7	78.7	81.5	83.2	85.5	86.4	85.9	84.9	82.1	79.6	75.3	[illegible]
50.0	73.7	75.6	78.7	79.5	82.7	83.0	82.5	81.3	79.1	76.6	74.8	[illegible]
63.0	70.3	73.9	76.5	78.3	[illegible]	78.7	79.5	77.9	75.1	74.2	74.2	[illegible]
80.0	65.0	67.7	70.5	71.7	74.6	76.0	76.6	74.2	71.9	71.6	72.8	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
OASPL	99.2	100.6	101.8	103.5	105.0	107.1	108.6	110.6	112.7	114.5	115.7	

EAPNL = [illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

```
STAND X206   RIG ID 7V5507   TEST DATE 01/18/77   SCALE RATIO 7.0/1   RUN NUMBER 20075   CONDITION 7503
                       PRIMARY    FAN                PRIMARY   FAN
     AREA   SQFT                          SQM                       MASS FLOW  LB/S
     P.R.              1.47      1.56               1.47      1.56  THRUST,IDL  LB
     TEMP   (R)      1325.0     620.0     (K)    736.1     340.9   THRUST,MEA  LB
     RHO   LB/FT3    0.033      0.072    KG/M3   0.534     1.152   AREA (MCD) SQFT
     VEL    FPS     1290.4     935.9     M/S     393.3     285.3   W (MCD)    LB/S
```

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	59.1	64.0	67.6	63.0	64.0	65.9	67.2	70.1	72.9	74.4	75.2
63	61.3	63.4	65.7	67.2	68.2	69.5	70.4	72.6	75.6	77.6	77.2
80	63.7	65.2	65.9	67.3	68.5	69.7	71.2	74.2	76.1	79.2	75.8
100	66.2	67.0	67.9	68.8	70.1	71.2	72.6	75.3	78.0	80.2	77.9
125	65.0	66.5	66.9	68.6	70.3	71.3	72.1	74.0	76.1	79.2	74.0
160	64.0	65.6	67.0	68.8	70.7	72.1	73.2	75.3	77.1	77.1	73.9
200	63.5	65.3	67.7	68.7	71.0	72.1	73.0	75.0	76.6	74.3	69.0
250	63.1	65.2	67.3	68.0	70.8	72.3	73.6	75.0	75.2	72.6	66.4
315	62.6	65.1	66.6	68.7	70.7	72.2	73.3	74.7	73.6	69.7	63.0
400	62.5	65.3	67.3	69.1	71.1	72.1	73.6	74.3	72.9	68.3	61.1
500	62.7	65.1	67.3	69.1	71.6	72.5	73.2	73.5	[illegible]	66.2	58.9
630	63.5	65.2	67.1	69.0	71.2	72.3	73.2	72.7	70.3	64.9	57.0
800	63.3	64.5	66.6	68.0	70.8	71.0	72.7	71.6	68.7	63.1	54.9
1000	62.5	64.3	66.1	68.1	70.5	71.3	71.5	70.5	67.1	61.6	52.3
1250	60.7	63.4	65.7	67.6	69.0	70.0	70.6	69.3	65.0	59.9	50.4
1600	59.4	62.2	64.4	66.6	68.6	69.3	69.0	67.7	63.5	57.3	47.3
2000	58.3	60.9	63.6	65.5	68.2	68.4	67.5	65.3	61.6	54.7	43.4
2500	56.3	58.9	61.7	64.1	66.3	66.5	65.3	62.8	58.4	51.2	38.3
3150	52.6	56.2	58.9	61.2	63.1	63.6	62.2	58.8	53.8	46.6	30.9
4000	49.4	53.2	56.3	58.7	60.4	60.6	58.5	54.6	49.3	40.3	23.1
5000	46.5	50.6	54.0	56.1	58.4	56.8	56.2	51.7	45.7	36.2	18.2
6300	41.8	45.7	49.6	51.6	53.6	53.4	51.0	46.4	39.3	28.5	8.8
8000	35.9	40.6	43.8	45.5	48.3	47.4	44.7	39.9	31.9	19.7	0.0
10000	25.7	30.3	34.5	36.8	38.2	37.1	33.9	28.6	18.1	4.2	0.0
OASPL	75.3	77.1	78.9	80.6	82.5	83.7	84.4	85.6	86.7	86.0	84.1
PNL	82.1	84.6	87.0	89.2	91.3	91.9	91.7	91.1	89.9	87.5	82.5

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
400. SIDELINE PNL	95.2	97.5	99.9	101.9	104.1	104.8	104.6	103.7	101.8	99.4	94.7
2000. SIDELINE PNL	74.9	77.5	80.0	82.0	84.2	84.8	84.8	84.0	83.6	81.1	75.9
4000. SIDELINE PNL	64.7	67.5	69.7	71.7	73.7	74.8	75.1	75.2	74.2	71.7	66.2
6000. SIDELINE PNL	58.3	61.2	63.5	65.4	67.4	68.5	68.9	69.6	68.3	65.8	60.8

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Scalloped Long Flowpath Mixer With Engine Secondary Flow Simulation; Configuration 7A; Condition 7504

a.) Model Data Measured At 15 Ft. Radius

STAND X2[illegible] RIG ID 705307 TEST DATE 01/18/77 SCALE RATIO 7.0/1 RUN NUMBER 26675 CONDITION 7504

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		1.76	1.70		1.76	1.70	THRUST,IDL	LB			N		
TEMP	(R)	1626.0	657.6	(K)	791.1	365.6	THRUST,MEA	LB		0.0	N		0.0
RHO	LB/FT3	0.032	0.071	KG/M3	0.510	1.131	AREA (MOD)	SQFT			SQM		
VEL	FPS	1505.3	1052.7	M/S	403.2	320.9	W (MODEL)	LB/S	2.6	2.0	KG/S	1.2	1.3

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS RAW CORRECTED SPL - (NOCAL)

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PEAK 11-120
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	77.3	80.2	82.6	83.7	83.4	84.5	85.0	89.3	91.0	94.2	98.3	110.0
.125	80.6	83.4	84.5	84.7	83.4	87.4	85.6	88.9	93.5	96.4	99.5	[illegible]
.160	83.6	85.6	83.6	84.5	84.0	85.1	86.9	89.3	94.3	98.6	101.7	113.7
.200	81.0	82.7	84.0	88.4	87.1	89.3	90.4	92.8	98.3	102.5	104.9	117.2
.250	82.7	84.4	85.9	87.9	88.6	89.6	91.7	95.4	99.9	104.4	106.4	116.9
.315	86.3	88.6	88.1	89.4	90.3	92.3	94.3	98.8	103.4	106.9	111.3	[illegible]
.400	88.3	89.4	91.2	92.7	94.1	95.9	97.7	101.8	106.8	110.5	113.4	[illegible]
.500	90.8	91.6	91.7	93.3	94.3	96.3	98.4	103.3	109.4	112.5	112.6	[illegible]
.630	94.0	93.9	94.7	95.6	96.5	96.1	100.3	105.7	110.6	114.6	115.2	[illegible]
.800	93.4	94.1	93.7	95.9	97.3	98.7	100.6	105.3	111.5	114.5	112.8	[illegible]
1.00	95.3	95.7	95.6	96.3	98.3	100.4	102.4	106.3	111.0	114.3	114.6	[illegible]
1.25	94.0	94.5	95.5	96.9	98.6	100.5	102.7	106.4	110.3	112.4	113.3	[illegible]
1.60	93.3	94.2	95.4	96.4	98.6	100.5	102.7	106.1	108.7	110.7	111.1	[illegible]
2.00	94.6	93.2	94.4	96.1	98.4	100.2	102.7	106.6	107.3	107.6	108.4	[illegible]
2.50	91.4	93.1	94.6	96.2	98.7	100.9	102.9	105.7	106.5	105.9	100.1	[illegible]
3.15	91.5	94.9	94.6	96.2	98.6	100.8	103.1	105.0	105.1	103.7	103.5	[illegible]
4.00	91.9	92.9	94.6	96.6	98.6	101.6	103.2	104.6	104.1	102.6	101.7	[illegible]
5.00	92.6	92.6	94.4	94.4	98.8	100.0	102.5	103.7	103.1	101.3	99.5	[illegible]
6.30	92.0	92.7	94.5	94.4	98.9	100.7	102.3	103.2	102.2	100.3	97.6	[illegible]
8.00	94.7	92.5	94.5	94.1	98.9	100.6	101.7	102.5	101.6	99.6	98.6	[illegible]
10.0	90.4	92.1	94.2	94.2	98.7	100.3	101.3	101.6	100.7	98.7	95.2	[illegible]
12.5	90.1	91.7	94.0	95.9	96.5	100.1	100.6	100.6	99.7	97.5	93.6	[illegible]
16.0	89.6	91.1	92.9	93.3	97.8	99.4	99.8	99.7	96.7	96.5	91.6	[illegible]
20.0	87.4	89.6	92.7	94.0	96.1	97.9	98.2	97.6	96.9	94.3	89.1	[illegible]
25.0	86.2	88.6	90.9	93.2	95.2	96.3	96.5	95.7	95.1	92.5	87.6	[illegible]
31.5	84.2	86.3	89.3	92.5	94.1	95.6	95.2	94.6	92.8	86.4	85.3	[illegible]
40.0	81.7	83.9	87.6	88.4	91.5	92.7	92.4	91.3	89.9	87.6	83.4	[illegible]
50.0	76.9	80.7	83.8	85.3	88.5	89.4	89.1	88.3	86.9	84.7	83.6	[illegible]
63.0	75.5	77.6	79.6	82.1	84.1	85.4	85.3	84.9	82.9	82.4	87.8	[illegible]
80.0	71.1	72.6	75.4	77.5	84.1	81.2	81.6	81.2	79.3	79.6	81.6	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	104.7	[illegible]	107.1	108.8	[illegible]	[illegible]	114.6	117.6	120.0	122.4	127.9	

LAPOL = [illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X2[illegible] RIG ID 705307 TEST DATE 01/18/77 SCALE RATIO 7.0/1 RUN NUMBER 26675 CONDITION 7504

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	[illegible]	[illegible]	KG/S	[illegible]	[illegible]
P.R.		1.76	1.70		1.76	1.70	THRUST,IDL	LB			N		
TEMP	(R)	1626.0	657.6	(K)	791.1	365.6	THRUST,MEA	LB		0.0	N		0.0
RHO	LB/FT3	0.032	0.071	KG/M3	0.510	1.131	AREA (FULL)	SQFT			SQM		
VEL	FPS	1505.3	1052.7	M/S	403.2	320.9	W (FULL)	LB/S	[illegible]	[illegible]	KG/S	[illegible]	[illegible]

FAA DAY

1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	63.6	66.0	66.7	68.1	68.9	70.5	71.0	75.2	78.2	79.5	80.3
63	65.0	67.6	69.6	71.4	72.7	74.1	75.2	78.7	81.6	83.1	82.6
80	66.3	69.0	70.3	72.0	72.9	74.5	75.9	79.7	84.2	85.1	81.2
100	70.3	72.0	73.2	74.2	75.0	76.2	77.6	81.4	85.2	87.0	84.0
125	70.7	72.7	72.2	74.5	75.0	76.0	77.9	81.5	86.1	86.9	81.6
160	70.7	[illegible]	73.4	74.6	76.7	78.3	79.6	82.4	85.5	86.4	83.1
200	71.2	72.6	73.9	75.4	77.2	76.6	79.9	82.5	84.0	84.5	81.0
250	70.4	72.6	73.7	74.0	76.9	76.3	79.0	82.6	83.6	82.6	79.3
315	68.6	70.8	72.4	74.3	76.4	77.0	79.5	81.6	84.2	79.0	75.9
400	68.1	70.6	72.5	74.3	76.6	78.4	79.0	81.2	80.3	77.1	73.2
500	67.9	70.1	72.1	74.1	76.3	78.0	79.5	80.2	78.5	74.5	70.6
630	68.1	69.9	72.1	74.2	76.3	78.0	79.4	79.7	77.2	72.9	67.5
800	67.8	69.4	71.5	73.9	75.9	77.4	78.3	78.7	75.6	70.9	64.2
1000	67.3	66.9	71.2	73.2	75.6	76.9	77.0	77.1	74.0	69.6	61.2
1250	65.5	68.2	70.7	72.9	75.1	76.3	76.5	75.0	72.7	67.4	58.0
1600	66.3	67.6	69.7	71.4	74.2	75.2	75.2	73.4	70.0	64.9	56.0
2000	63.1	65.0	68.7	70.0	73.2	74.2	73.6	71.9	68.4	62.1	54.9
2500	61.2	64.1	66.6	69.2	71.5	72.4	71.6	69.6	65.7	58.9	43.0
3150	57.7	61.3	64.1	66.7	68.5	69.0	68.4	65.0	61.0	53.4	30.0
4000	54.5	58.4	61.6	64.2	65.9	66.1	66.0	61.6	57.2	48.3	31.1
5000	51.7	55.7	59.4	61.9	64.2	64.2	62.7	58.9	53.6	44.5	26.5
6300	48.0	50.9	55.1	57.3	59.6	59.7	57.5	53.3	47.1	38.7	16.9
8000	41.1	45.1	49.2	51.3	54.1	53.0	51.3	46.9	39.7	27.0	7.2
10000	30.9	35.4	39.0	42.0	44.1	43.8	40.7	35.6	25.9	12.4	0.0
OASPL	80.9	82.5	84.2	86.0	87.9	89.3	90.4	92.7	94.1	94.3	91.3
PNL	87.5	90.0	92.4	94.6	96.0	97.0	97.9	98.0	97.7	95.0	91.5

	800. SIDELINE										
PNL	100.5	102.0	105.1	107.3	109.5	110.7	110.0	110.5	109.4	107.6	103.4
	2000. SIDELINE										
PNL	80.3	82.9	85.4	87.5	89.3	90.7	91.0	91.7	91.6	89.9	85.4
	4000. SIDELINE										
PNL	70.0	73.1	75.3	77.3	79.4	80.7	81.3	82.3	82.7	81.6	76.0
	6000. SIDELINE										
PNL	64.5	66.9	69.1	71.6	73.1	74.4	75.1	76.1	76.0	75.1	69.7

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Scalloped Long Flowpath Mixer With Engine Secondary Flow Simulation; Configuration 7A; Condition 7505

a.) Model Data Measured At 15 Ft. Radius

STAND A706 RIG ID 70550T TEST DATE 01/18/77 SCALE RATIO 7.0/1 RUN NUMBER [illegible] CONDITION 7505

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		1.79	1.74		1.79	1.74
TEMP	(R)	1439.0	665.0	(K)	799.4	369.4
RHO	LB/FT3	0.032	0.070	KG/M3	0.517	1.125
VEL	FPS	1635.7	1081.9	M/S	498.6	329.8

MASS FLOW LB/S; THRUST,IDL LB; THRUST,MEA LB; AREA (MODL) SQFT; W (MODEL) LB/S — PRIMARY / FAN / PRIMARY / FAN: [illegible]

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (MODEL)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PNLM 60-120
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.100	76.3	80.9	83.6	84.2	84.3	85.5	86.6	90.6	91.8	95.2	99.5	[illegible]
.125	81.2	83.9	83.1	83.6	86.4	88.4	86.7	89.9	94.3	97.2	100.5	[illegible]
.160	81.9	84.2	84.6	85.7	84.9	86.2	87.6	90.0	95.2	99.5	102.7	[illegible]
.200	82.6	83.3	86.0	87.2	88.1	90.2	91.3	93.9	99.4	103.6	106.4	[illegible]
.250	84.1	85.4	87.1	88.8	89.6	90.8	92.7	96.5	101.0	105.8	107.9	[illegible]
.315	87.1	87.5	88.0	90.2	90.9	93.0	95.2	99.4	104.1	107.8	112.2	[illegible]
.400	89.2	90.2	92.0	93.6	95.0	96.9	98.5	102.7	107.8	111.5	114.3	[illegible]
.500	91.9	92.4	92.0	94.2	95.3	97.4	99.6	104.4	110.3	113.6	112.9	[illegible]
.630	95.0	96.6	95.5	96.4	97.4	99.1	101.5	106.6	117.0	115.7	116.1	[illegible]
.800	94.5	95.2	94.6	96.7	98.4	99.9	101.7	106.8	112.8	115.9	113.9	[illegible]
1.00	94.6	95.1	96.1	97.1	99.3	101.6	103.5	107.7	112.7	116.2	116.2	[illegible]
1.25	95.3	95.9	96.9	98.3	100.2	101.7	103.9	107.8	112.0	114.5	115.1	[illegible]
1.60	95.6	95.5	96.7	97.0	99.9	101.8	103.9	107.4	110.5	113.1	113.4	[illegible]
2.00	93.6	96.7	95.6	97.2	99.5	101.7	104.0	107.4	108.8	110.3	111.1	[illegible]
2.50	92.9	96.5	95.8	97.2	99.6	102.1	104.3	107.1	108.0	108.5	109.0	[illegible]
3.15	92.9	96.1	95.6	97.5	99.7	102.0	104.2	106.4	106.5	106.3	106.6	[illegible]
4.00	93.6	94.1	95.5	97.6	99.9	102.1	104.4	106.0	105.6	105.0	[illegible]	[illegible]
5.00	93.1	93.7	95.5	97.3	99.6	101.9	103.8	105.1	104.4	103.4	[illegible]	[illegible]
6.30	92.9	93.9	95.4	97.4	100.0	101.9	103.6	104.4	103.4	102.3	100.1	[illegible]
8.00	91.6	93.7	95.3	97.2	99.9	101.9	101.0	103.9	103.6	101.4	98.7	[illegible]
10.0	91.3	93.3	94.9	97.1	99.8	101.3	102.4	102.8	102.1	100.2	97.3	[illegible]
12.5	91.1	93.0	94.4	96.8	99.5	101.3	102.0	102.0	101.1	98.9	95.4	[illegible]
16.0	90.3	92.3	94.6	96.5	98.9	100.6	101.6	101.1	100.2	97.9	93.6	[illegible]
20.0	88.4	90.9	92.7	95.0	97.3	99.1	99.3	99.1	96.3	93.8	90.7	[illegible]
25.0	87.6	89.8	91.9	94.2	96.3	97.5	97.0	97.6	96.9	94.6	88.7	[illegible]
31.5	85.6	87.7	90.4	92.3	95.4	96.2	96.4	95.4	94.5	91.8	86.9	[illegible]
40.0	82.6	85.0	87.9	90.6	92.8	94.0	93.7	93.1	91.0	89.3	84.6	[illegible]
50.0	79.6	82.0	84.6	86.5	89.3	90.7	90.4	90.4	88.5	86.5	83.9	[illegible]
63.0	76.2	78.3	81.1	83.3	85.5	86.8	86.6	87.6	84.6	84.1	83.4	[illegible]
80.0	71.7	74.0	77.0	78.8	81.5	82.5	82.4	84.4	81.1	81.5	81.4	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
OASPL	105.0	106.9	108.2	109.9	112.1	114.0	115.6	118.3	121.4	124.6	124.9	

LAPNL = [illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND A706 RIG ID 70550T TEST DATE 01/18/77 SCALE RATIO 7.0/1 RUN NUMBER [illegible] CONDITION 7505

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		1.79	1.74		1.79	1.74
TEMP	(R)	1439.0	665.0	(K)	799.4	369.4
RHO	LB/FT3	0.032	0.070	KG/M3	0.517	1.125
VEL	FPS	1635.7	1081.9	M/S	498.6	329.8

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	66.0	65.7	67.4	66.9	69.5	71.2	72.7	75.8	78.9	80.4	81.6
63	66.7	68.4	70.6	72.3	73.6	75.1	76.0	79.1	82.6	84.1	83.5
80	69.4	70.6	71.2	72.9	73.9	75.0	77.1	80.8	85.1	86.2	82.1
100	72.3	72.9	74.6	75.0	75.9	77.2	78.8	82.8	86.6	86.1	84.9
125	71.0	73.3	73.1	75.3	76.5	78.6	79.8	83.0	87.4	88.3	87.7
160	74.0	73.6	74.5	75.8	77.7	79.3	80.7	83.9	87.2	88.3	84.7
200	77.5	73.8	75.9	76.6	78.6	79.6	81.1	83.9	86.5	86.6	83.0
250	72.1	75.3	75.6	76.2	76.2	79.6	81.6	83.3	84.6	85.6	81.6
315	70.4	72.3	73.6	75.4	77.5	79.3	80.8	83.0	82.7	81.7	78.6
400	69.6	72.0	73.7	75.3	77.7	79.6	81.0	82.6	81.6	79.7	78.1
500	69.3	71.3	73.3	75.4	77.6	79.2	80.6	81.6	79.9	77.1	73.1
630	69.2	71.1	73.6	75.2	77.4	79.1	80.6	80.9	78.7	75.3	76.4
800	68.5	70.3	72.6	74.6	76.7	78.5	79.6	79.6	76.9	73.8	66.8
1000	68.4	70.1	72.1	74.2	76.7	78.1	78.8	78.3	75.2	71.6	63.5
1250	66.4	69.4	71.5	73.6	76.1	77.0	77.8	77.2	74.1	69.2	60.7
1600	65.2	68.2	70.4	77.6	75.3	76.2	76.3	75.1	72.0	66.4	57.0
2000	64.1	67.1	69.6	71.7	74.2	75.4	75.6	73.1	69.8	63.5	52.7
2500	62.1	65.3	67.7	70.4	72.6	73.6	72.8	71.6	67.2	60.3	47.8
3150	58.7	62.6	65.1	67.7	69.1	70.0	69.6	67.3	63.4	55.4	40.4
4000	55.3	59.6	62.6	65.2	67.0	67.3	66.1	63.3	58.8	49.8	37.8
5000	52.5	56.9	60.5	63.0	65.5	65.4	63.9	60.3	55.3	45.9	20.1
6300	47.1	52.0	56.6	58.4	60.9	61.6	58.8	55.1	46.0	36.4	10.1
8000	41.0	46.4	50.2	52.9	55.5	55.8	52.6	49.6	41.3	29.6	0.1
10000	31.6	40.7	41.1	43.4	45.5	45.6	42.6	38.3	27.6	14.1	0.0
OASPL	82.1	83.7	85.3	87.1	89.0	90.5	91.6	93.6	95.5	95.9	92.7
PNL	88.6	91.2	93.4	95.7	97.9	99.1	99.2	99.4	99.2	97.8	93.6

400. SIDELINE

PNL	101.5	104.6	106.2	108.4	110.6	111.9	112.6	111.9	111.6	109.5	105.3

2000. SIDELINE

PNL	81.6	84.2	86.4	88.5	90.8	91.9	92.3	93.1	92.2	91.0	87.3

4000. SIDELINE

PNL	72.0	74.4	76.4	78.3	80.5	81.9	82.6	83.7	84.3	83.1	78.0

6000. SIDELINE

PNL	66.0	68.7	70.2	72.1	74.3	75.7	76.4	77.6	78.5	77.2	71.7

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Scalloped Long Flowpath Mixer With Engine Secondary Flow Simulation; Configuration 7A; Condition 7506

a.) Model Data Measured At 15 Ft. Radius

STAND A7 ... TEST DATE 01/10/77 SCALE RATIO 7.0/1 RUN NUMBER ... CONDITION 7506

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PEAK
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

1/3 OCTAVE BAND

ANGLE IN DEGREES

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Scalloped Long Flowpath Mixer With Engine Secondary Flow Simulation; Configuration 7A; Condition 7507

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 765307 TEST DATE 01/10/77 SCALE RATIO 7.0/1 RUN NUMBER 20675 CONDITION 7507

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS RAW CORRECTED SPL - (MODEL)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PWL
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.125	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.160	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.200	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.315	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.400	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.630	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.800	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.60	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OASPL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 765307 TEST DATE 01/10/77 SCALE RATIO 7.0/1 RUN NUMBER 20675 CONDITION 7507

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OASPL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PNL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Scalloped Long Flowpath Mixer With Engine Secondary Flow Simulation; Configuration 7A; Condition 7508

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG TU 705307 TEST DATE 01/10/77 SCALE RATIO 7.0/1 RUN NUMBER 2467? CONDITION 7508

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN	PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S	0.0	0.0 KG/S	0.0	0.0
P.R.		2.06	1.95		2.06	1.95	THRUST,IDL LB				
TEMP	(R)	1567.0	603.6	(K)	859.6	370.6	THRUST,MEA LB				
RHO	LB/FT3	0.031	0.071	KG/M3	0.497	1.130	AREA (NOZ) SQFT	0.00	0.0 SQM	0.000	0.000
VEL	FPS	1872.0	1193.9	M/S	570.6	363.9	W (NOZZLE) LB/S	[illegible]	[illegible] KG/S	[illegible]	[illegible]

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS RAW CORRECTED SPL - (MODEL)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PNLKR AT -1?M
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.100	87.1	86.[illegible]	87.5	88.1	87.9	89.6	89.7	92.9	94.7	98.0	102.0	[illegible]
.125	86.3	88.4	88.6	88.7	89.9	91.6	89.4	92.7	97.2	100.5	103.5	[illegible]
.160	87.8	89.7	88.3	88.7	88.2	89.5	90.8	93.0	98.3	102.9	106.1	[illegible]
.200	88.3	88.6	89.3	90.2	91.1	93.3	94.3	96.8	102.4	107.6	109.7	[illegible]
.250	87.4	88.3	90.2	92.1	92.6	93.0	95.6	99.3	104.4	109.0	111.3	[illegible]
.315	90.3	90.6	92.1	93.7	94.3	96.3	98.4	102.6	107.7	111.5	115.9	[illegible]
.400	92.7	93.1	94.7	96.6	98.0	100.1	103.5	106.3	111.7	115.2	118.0	[illegible]
.500	95.4	95.7	95.6	97.2	98.4	100.4	102.6	108.0	114.3	117.6	116.6	[illegible]
.630	96.2	97.7	98.7	99.6	100.5	102.7	106.0	110.8	116.3	119.6	119.4	[illegible]
.800	97.7	98.3	98.1	100.2	101.7	102.9	105.1	111.4	117.9	120.2	117.3	[illegible]
1.00	98.2	98.9	99.7	101.6	102.9	105.3	107.3	112.8	116.4	120.8	119.8	[illegible]
1.25	99.6	99.5	100.8	102.2	104.1	106.5	108.0	112.9	118.6	120.3	119.6	[illegible]
1.60	99.9	100.3	101.3	102.1	104.1	106.2	108.2	112.5	117.7	120.6	119.1	[illegible]
2.00	98.9	99.3	100.4	101.8	103.8	106.0	106.3	112.1	116.1	119.3	118.0	[illegible]
2.50	98.2	99.1	100.2	101.7	103.9	106.4	108.6	112.1	115.0	[illegible]	[illegible]	[illegible]
3.15	98.0	98.6	100.0	101.5	103.7	106.1	108.7	111.2	113.4	116.0	[illegible]	[illegible]
4.00	97.5	98.1	99.6	101.6	103.9	106.2	108.9	111.0	112.3	114.4	[illegible]	[illegible]
5.00	97.2	97.8	99.4	101.2	103.7	106.1	108.5	110.2	[illegible]	[illegible]	[illegible]	[illegible]
6.30	96.9	97.8	99.3	101.3	104.1	106.2	108.1	109.5	110.1	110.9	107.8	[illegible]
8.00	95.7	97.5	99.4	101.2	104.6	106.2	107.7	108.9	109.3	109.3	106.2	[illegible]
10.0	95.2	96.9	99.1	101.1	103.8	105.8	107.3	107.9	108.2	107.7	104.5	[illegible]
12.5	94.8	96.6	98.8	100.9	103.6	105.7	106.7	107.3	107.1	106.2	102.7	[illegible]
16.0	93.9	96.0	98.1	100.5	103.2	105.3	105.8	106.5	106.0	104.9	101.1	[illegible]
20.0	92.6	94.7	96.8	99.1	101.6	103.7	106.2	106.6	104.1	102.9	98.3	[illegible]
25.0	90.7	93.6	96.1	98.4	100.8	102.7	102.5	102.9	102.7	101.1	98.2	[illegible]
31.5	88.8	91.5	94.5	96.8	99.9	101.6	101.4	101.7	100.9	99.5	96.3	[illegible]
40.0	86.7	89.6	92.4	94.5	97.5	98.9	98.5	99.1	98.1	96.8	91.5	[illegible]
50.0	83.6	86.1	89.1	91.1	94.7	95.8	95.6	96.4	95.4	94.0	89.7	[illegible]
63.0	80.2	82.9	85.5	87.8	90.5	91.9	[illegible]	93.4	91.8	91.0	88.7	[illegible]
80.0	75.8	78.2	81.6	83.4	86.5	88.6	88.2	90.2	88.5	88.1	88.6	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
OSPL	109.9	110.8	112.2	113.8	116.1	118.2	119.5	123.1	127.2	12[illegible].7	128.9	

PNLT MAX = [illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG TU 705307 TEST DATE 01/10/77 SCALE RATIO 7.0/1 RUN NUMBER 2467? CONDITION 7508

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN	PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S	149.6	151.6 KG/S	67.8	[illegible]
P.R.		2.06	1.95		2.06	1.95	THRUST,IDL LB				
TEMP	(R)	1547.0	603.6	(K)	859.6	370.6	THRUST,MEA LB				
RHO	LB/FT3	0.031	0.071	KG/M3	0.497	1.130	AREA (NOZ) SQFT				
VEL	FPS	1872.0	1193.9	M/S	570.6	363.9	W (NOZZLE) LB/S	[illegible]	[illegible] KG/S	[illegible]	[illegible]

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	67.8	68.8	70.7	[illegible]	72.9	74.5	75.9	79.2	82.5	84.1	85.1
63	70.2	71.3	73.3	[illegible]	76.6	78.3	79.6	82.7	86.5	87.6	87.7
80	72.9	73.9	74.2	75.9	77.0	78.6	80.1	84.4	89.1	90.2	85.8
100	75.5	75.8	77.2	78.2	79.6	80.5	82.1	87.0	90.9	92.6	88.2
125	75.6	76.4	76.6	78.5	80.2	81.6	82.6	87.6	92.5	92.6	86.3
160	75.4	76.8	78.1	79.7	81.3	83.2	84.5	88.9	92.9	92.9	86.3
200	76.2	77.4	79.2	80.7	82.5	84.4	85.2	89.0	93.1	92.6	88.1
250	77.3	78.1	79.6	80.5	82.4	84.0	85.3	88.4	92.6	92.5	87.3
315	75.7	76.9	78.4	80.0	81.8	83.6	85.1	87.9	90.0	90.7	85.5
400	74.9	76.6	78.1	79.8	81.8	83.9	85.3	87.6	88.6	89.3	84.0
500	74.4	75.8	77.7	79.4	81.4	83.3	85.1	86.4	86.8	86.8	81.2
630	73.7	75.3	77.1	79.2	81.4	83.2	83.1	85.9	85.4	84.7	78.1
800	73.6	74.4	76.5	78.5	80.4	87.7	84.1	84.7	83.6	82.1	74.7
1000	72.2	74.0	76.0	78.1	80.8	82.4	83.4	83.4	81.9	79.6	71.7
1250	70.5	73.2	75.6	77.6	80.2	81.9	82.5	82.2	80.4	77.1	68.2
1600	69.1	71.8	74.6	76.8	79.3	80.7	81.2	80.2	78.1	73.9	64.2
2000	67.8	70.7	73.5	75.8	78.3	79.8	79.7	78.6	75.8	70.8	60.0
2500	65.7	69.0	71.8	74.4	76.9	78.3	77.6	76.4	73.6	67.3	55.1
3150	62.3	66.4	69.2	71.8	74.6	75.4	74.5	72.6	69.0	62.5	48.0
4000	59.6	63.4	66.8	69.4	71.5	72.0	70.8	68.8	64.6	56.9	46.3
5000	56.3	60.7	64.6	67.2	70.0	70.2	68.9	66.1	61.5	53.2	35.3
6300	51.8	56.0	60.5	62.9	65.0	65.9	64.0	61.1	55.3	45.9	25.0
8000	45.0	56.5	54.7	57.1	60.3	60.2	58.6	55.0	48.2	37.1	13.9
10000	35.6	40.8	45.3	48.3	50.5	50.3	47.4	44.1	36.0	21.6	0.0
OASPL	86.2	87.6	89.3	91.6	92.9	94.6	95.8	98.4	101.7	101.4	97.6
PNL	92.6	95.2	97.4	99.8	102.1	103.5	103.7	104.5	105.5	104.7	98.8
400. SIDELINE											
PNL	105.4	107.9	108.3	1[illegible]2.3	114.8	116.3	116.6	117.1	117.2	116.5	110.9
2000. SIDELINE											
PNL	86.2	88.2	90.5	92.7	94.9	96.3	96.7	98.2	99.5	98.7	92.6
4000. SIDELINE											
PNL	76.7	78.7	80.7	82.6	84.6	86.3	87.1	88.7	90.7	89.8	83.3
6000. SIDELINE											
PNL	70.7	72.6	74.6	76.4	78.4	80.0	80.8	82.9	85.2	83.9	76.9

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Scalloped Long Flowpath Mixer With Engine Secondary Flow Simulation; Configuration 7A; Condition 7509

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 705307 TEST DATE 01/10/77 SCALE RATIO 7.0/1 RUN NUMBER 2607 CONDITION 7509

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		2.13	1.90		2.13	1.90	THRUST,IDL	LB			N		
TEMP	(R)	1662.0	691.0	(K)	923.3	383.9	THRUST,MEA	LB		0.0	N		0.0
RHO	LB/FT3	0.029	0.070	KG/M3	0.465	1.122	AREA (MOD)	SQFT			SQM		
VEL	FPS	1980.3	1215.0	M/S	603.6	370.3	W (MODEL)	LB/S	3.1	3.1	KG/S	1.4	1.4

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (MODEL)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PWL
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	82.0	85.5	87.9	88.3	87.8	89.3	90.4	93.4	94.9	99.0	103.0	115.3
.125	85.3	89.1	88.6	89.7	90.5	91.8	89.7	93.4	97.9	100.7	104.1	[illegible]
.160	87.8	90.2	89.0	89.2	88.3	89.8	91.0	93.1	96.6	103.2	106.6	[illegible]
.200	87.4	88.0	90.2	91.3	92.1	93.7	94.7	97.3	102.9	107.2	110.2	[illegible]
.250	88.3	89.6	[illegible]	92.1	92.9	94.6	96.1	99.9	104.9	109.3	111.5	[illegible]
.315	91.0	92.6	93.6	94.3	95.2	96.9	98.8	103.4	108.1	112.0	116.0	[illegible]
.400	94.5	96.1	97.3	98.0	99.6	100.5	102.3	107.0	112.1	115.5	118.8	[illegible]
.500	96.7	97.1	96.7	97.9	98.9	101.6	103.2	108.4	114.9	118.5	117.0	[illegible]
.630	99.6	99.2	98.8	99.9	101.1	102.6	105.4	111.3	117.1	120.1	119.6	[illegible]
.800	99.6	98.6	99.6	100.8	102.4	103.7	106.0	112.5	116.8	121.1	116.0	[illegible]
1.00	99.9	99.9	100.2	101.6	103.7	106.1	106.1	113.9	119.9	121.6	120.3	[illegible]
1.25	101.1	101.2	102.6	102.6	105.2	107.6	108.9	114.2	120.3	121.6	120.0	[illegible]
1.60	101.7	101.3	101.0	102.7	104.6	107.3	109.1	113.7	119.5	122.1	119.9	[illegible]
2.00	100.5	100.6	101.3	102.6	104.7	106.6	109.3	113.3	118.2	121.6	118.6	[illegible]
2.50	99.5	100.7	101.2	102.7	104.9	107.3	109.7	113.3	117.1	119.9	[illegible]	[illegible]
3.15	99.6	99.7	100.9	102.5	104.6	107.2	109.8	112.3	115.6	117.9	115.7	[illegible]
4.00	98.4	99.5	100.9	102.8	104.9	107.6	109.5	112.6	114.5	116.3	113.7	[illegible]
5.00	98.4	99.6	100.5	102.3	104.7	106.9	109.3	111.0	113.2	114.4	111.3	[illegible]
6.30	98.2	99.0	100.6	102.4	105.0	107.1	109.2	110.3	112.1	112.5	109.1	[illegible]
8.00	96.5	98.0	100.7	102.1	104.0	107.2	108.0	109.7	111.0	110.8	107.6	[illegible]
10.0	96.3	98.9	100.4	102.3	104.6	106.7	108.3	108.7	109.7	109.2	105.8	[illegible]
12.5	96.1	98.0	100.4	102.0	104.6	106.7	107.7	107.9	108.2	107.6	104.1	[illegible]
16.0	95.3	97.5	99.6	101.3	104.3	106.0	106.9	107.1	107.4	106.4	102.7	[illegible]
20.0	93.6	96.7	98.5	100.7	103.0	104.0	105.2	105.5	105.6	104.4	100.3	[illegible]
25.0	92.3	95.4	97.8	100.0	102.2	103.5	103.6	104.1	104.1	102.8	96.9	[illegible]
31.5	90.6	93.2	96.6	98.5	101.5	102.3	102.7	102.4	102.3	101.2	96.3	[illegible]
40.0	88.2	91.0	94.6	96.5	99.3	100.6	100.6	100.4	100.2	99.3	93.4	[illegible]
50.0	85.7	89.4	91.5	93.3	96.0	97.5	97.7	98.1	97.9	96.6	92.1	[illegible]
63.0	82.3	84.6	88.6	90.6	92.9	94.1	94.5	94.4	94.7	94.0	90.7	[illegible]
80.0	79.3	80.6	84.1	86.3	89.3	90.5	[illegible]	92.4	92.7	91.6	[illegible]	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	111.4	112.1	113.9	116.0	117.0	119.1	120.9	124.1	128.7	130.4	129.5	

CAPWL = [illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 705307 TEST DATE 01/10/77 SCALE RATIO 7.0/1 RUN NUMBER 2607 CONDITION 7509

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	153.9	[illegible]	KG/S	[illegible]	[illegible]
P.R.		2.13	1.90		2.13	1.90	THRUST,IDL	LB			N		
TEMP	(R)	1662.0	691.0	(K)	923.3	383.9	THRUST,MEA	LB		0.0	N		0.0
RHO	LB/FT3	0.029	0.070	KG/M3	0.465	1.122	AREA (MOD)	SQFT			SQM		
VEL	FPS	1980.3	1215.0	M/S	603.6	370.3	W (MODEL)	LB/S	3.1	3.1	KG/S	1.4	1.4

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	68.5	70.0	72.0	73.0	73.7	75.1	76.3	79.8	82.9	84.6	85.2
63	72.4	74.3	75.9	76.7	77.6	76.7	79.0	83.4	86.9	88.1	88.0
80	74.2	75.1	75.3	76.0	77.5	79.2	80.7	84.0	89.7	91.1	88.2
100	76.9	77.3	77.3	78.5	79.6	80.1	82.7	87.5	91.7	92.5	88.4
125	76.9	76.7	[illegible]	79.4	80.9	81.0	83.3	88.7	93.4	93.5	88.8
160	77.1	77.0	78.6	80.1	[illegible]	[illegible]	85.3	90.0	94.4	93.7	88.6
200	78.2	79.1	80.0	81.3	[illegible]	84.9	86.1	90.3	94.0	93.5	88.5
250	78.0	79.1	80.1	81.1	83.1	85.1	86.2	89.0	93.0	94.0	88.1
315	77.3	78.2	79.3	80.0	82.7	84.2	86.1	88.5	92.1	92.4	86.3
400	76.2	77.7	79.1	80.6	82.0	84.0	86.4	88.0	90.9	91.1	85.3
500	75.4	76.9	78.6	80.4	82.3	84.4	86.2	87.5	89.0	88.7	82.2
630	74.8	76.5	78.4	80.2	82.4	84.4	86.1	86.9	87.6	86.6	79.3
800	74.2	75.6	77.6	79.6	81.8	83.5	85.1	85.5	85.7	84.0	76.0
1000	73.5	75.2	77.3	79.2	81.7	83.3	84.5	84.2	83.9	81.2	72.5
1250	71.7	74.5	76.9	78.7	81.0	82.9	83.6	83.0	82.1	78.6	69.4
1600	70.2	73.3	75.9	78.0	80.1	81.6	82.2	81.0	79.6	75.4	65.5
2000	69.1	72.1	75.1	76.9	79.3	80.8	80.7	79.2	76.9	72.2	61.6
2500	67.1	70.5	73.1	75.6	78.0	79.0	78.7	77.2	74.4	68.0	56.7
3150	63.7	67.9	70.9	73.4	75.4	76.5	75.5	73.7	70.5	64.4	50.0
4000	60.6	65.0	68.5	71.0	72.9	73.3	72.1	70.6	66.2	58.6	42.5
5000	58.1	62.4	66.5	68.9	71.0	71.5	70.2	67.3	63.1	55.3	37.5
6300	53.3	58.6	62.5	64.4	67.4	67.6	65.7	62.4	57.4	48.4	27.3
8000	47.9	52.6	57.1	59.3	62.4	61.9	59.9	56.7	50.7	39.7	16.3
10000	37.7	43.0	48.0	50.9	52.9	52.5	49.9	43.6	37.7	24.6	0.0
OASPL	87.7	88.9	90.3	91.9	93.6	95.5	96.8	99.4	102.7	102.6	97.6
PNL	94.1	96.6	98.9	101.0	103.1	104.4	104.8	105.5	107.2	106.2	99.7
400. SIDELINE											
PNL	106.9	109.3	111.6	113.7	115.9	117.2	117.7	118.6	118.9	117.9	111.0
2000. SIDELINE											
PNL	87.8	89.5	91.9	93.8	95.9	97.3	97.8	99.2	101.1	100.1	93.4
4000. SIDELINE											
PNL	78.4	80.0	81.8	[illegible]	85.6	87.2	88.1	89.8	92.4	91.1	84.0
6000. SIDELINE											
PNL	72.4	73.9	75.6	77.4	79.4	80.9	81.9	84.1	86.8	85.3	77.6

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Scalloped Long Flowpath Mixer With Engine Secondary Flow Simulation; Configuration 7A; Condition 7510

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 765307 TEST DATE 01/18/77 SCALE RATIO 7.0/1 RUN NUMBER 20675 CONDITION 7510

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		2.11	1.99		2.11	1.99	THRUST,IDL	LB			N		
TEMP	(R)	1630.0	690.6	(K)	905.6	387.0	THRUST,PLA	LB	0.0		N	0.0	
DNS	LB/FT3	0.036	0.069	KG/M3	0.573	1.112	AREA (NOD)	SQFT			SQM		
VEL	FPS	1956.3	1224.4	M/S	596.4	373.2	W (MODEL)	LB/S	1.7	1.1	KG/S	1.4	1.1

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS RAW CORRECTED SPL - (NULL)

MICROPHONE ANGLES IN DEGREES

BAND CENTER FR.) (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PWL
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.100	82.7	85.9	88.0	88.5	88.1	89.5	90.7	93.3	95.1	98.8	103.6	[illegible]
.125	85.3	89.1	88.7	89.8	90.8	91.7	89.7	93.8	98.1	106.9	106.2	[illegible]
.160	87.7	90.4	88.8	89.4	88.5	89.6	90.9	93.1	98.9	103.5	106.7	[illegible]
.200	87.6	88.3	90.5	91.4	92.4	93.6	94.7	97.5	103.2	107.3	110.1	[illegible]
.250	88.0	89.8	91.0	92.4	93.2	94.6	96.2	99.8	105.2	109.6	111.9	[illegible]
.315	91.0	92.8	93.6	94.5	95.4	97.1	98.6	103.6	108.6	112.6	110.1	[illegible]
.400	95.3	96.7	97.6	98.3	99.6	100.5	102.1	107.1	112.1	115.6	118.9	[illegible]
.500	97.6	97.1	97.0	98.1	99.0	101.4	103.5	106.8	115.1	118.5	117.1	[illegible]
.630	99.5	98.8	98.8	99.8	101.5	102.8	105.6	111.7	117.4	120.2	119.5	[illegible]
.800	99.6	98.6	99.3	100.7	102.5	103.8	106.1	112.6	116.8	121.0	118.1	[illegible]
1.00	100.4	100.1	100.2	101.5	103.9	105.9	108.2	113.9	119.9	121.8	120.3	[illegible]
1.25	101.3	101.3	101.4	102.7	105.2	106.4	108.9	[illegible]	120.3	121.4	119.8	[illegible]
1.60	102.2	101.3	101.9	102.8	105.0	107.4	109.1	113.9	119.8	[illegible]	120.1	[illegible]
2.00	101.0	100.7	101.2	102.6	104.7	106.8	109.4	113.3	118.6	121.1	118.7	[illegible]
2.50	99.9	100.4	101.1	102.6	104.9	107.3	109.8	113.6	117.2	120.0	118.3	[illegible]
3.15	99.2	99.7	100.9	102.5	104.9	107.1	109.9	112.7	115.9	118.1	115.9	[illegible]
4.00	98.7	99.6	101.0	102.5	105.6	107.6	110.6	112.1	114.9	116.6	111.9	[illegible]
5.00	98.5	99.3	100.7	102.2	104.7	107.3	109.3	111.8	113.7	114.7	111.5	[illegible]
6.30	98.4	99.1	100.9	102.4	105.2	107.5	109.1	110.6	112.4	112.9	109.5	[illegible]
8.00	97.8	99.4	100.9	102.5	105.1	107.5	108.7	110.6	111.5	111.4	108.0	[illegible]
10.0	96.6	98.9	100.9	102.5	105.1	107.2	108.3	109.1	110.1	109.8	106.2	[illegible]
12.5	96.4	98.6	100.8	102.3	104.9	107.1	107.8	108.4	108.8	108.4	104.5	[illegible]
16.0	95.6	98.1	100.1	101.9	104.7	106.6	106.9	107.5	107.7	106.9	103.2	[illegible]
20.0	94.1	97.1	99.1	101.0	103.3	105.2	105.4	105.9	106.1	105.1	100.8	[illegible]
25.0	92.9	96.1	98.4	100.2	102.6	104.0	104.0	104.3	104.6	102.4	98.7	[illegible]
31.5	91.2	94.2	97.2	98.9	101.9	103.0	102.9	102.8	102.0	102.1	[illegible]	[illegible]
40.0	89.1	92.1	95.3	97.3	99.9	102.5	100.9	101.1	101.6	[illegible]	95.1	[illegible]
50.0	86.5	89.3	92.3	94.0	97.6	98.5	98.3	98.9	98.0	98.0	93.4	[illegible]
63.0	83.9	85.7	88.9	91.0	93.7	95.0	95.1	96.2	95.0	95.1	92.1	[illegible]
80.0	79.3	81.6	83.2	87.2	90.0	91.6	91.5	93.2	92.7	92.1	90.2	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
OASPL	[illegible]	[illegible]	[illegible]	[illegible]	117.2	119.3	121.6	126.3	127.9	131.6	129.6	[illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 765307 TEST DATE 01/18/77 SCALE RATIO 7.0/1 RUN NUMBER 20675 CONDITION 7510

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	[illegible]	[illegible]	KG/S	[illegible]	[illegible]
P.R.		2.11	1.99		2.11	1.99	THRUST,IDL	LB			N		
TEMP	(R)	1630.0	690.0	(K)	905.6	387.0	THRUST,PLA	LB	[illegible]		N	[illegible]	
DNS	LB/FT3	0.036	0.069	KG/M3	0.573	1.112	AREA (NOD)	SQFT			SQM		
VEL	FPS	1956.3	1224.4	M/S	596.4	373.2	W (MODEL)	LB/S	[illegible]	[illegible]	KG/S	[illegible]	[illegible]

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	68.5	71.6	72.2	73.2	74.6	75.3	76.1	80.6	82.6	84.8	85.3
63	72.8	74.9	76.2	77.0	77.6	76.7	79.6	83.5	86.9	88.2	88.1
80	74.5	75.3	75.6	76.6	77.6	79.6	81.6	85.6	85.9	88.2	88.1
100	76.0	76.9	77.3	78.4	79.8	80.9	82.9	85.6	85.9	91.1	88.3
125	76.9	76.9	77.8	79.3	81.0	81.9	83.4	88.6	93.4	93.6	88.9
160	77.6	78.6	78.6	80.6	82.3	83.8	85.4	90.0	90.4	93.7	86.8
200	78.5	79.2	79.8	81.2	83.6	84.3	86.1	90.3	90.8	93.5	88.3
250	79.3	79.1	80.2	81.2	83.9	85.2	86.2	89.6	94.8	94.1	88.3
315	77.8	78.3	79.2	80.8	82.7	84.4	86.2	88.9	92.5	92.5	86.2
400	76.6	77.9	79.[illegible]	80.7	82.8	84.8	86.5	88.5	91.0	91.2	85.4
500	75.6	76.9	78.6	80.4	82.0	84.5	86.3	87.9	89.3	88.9	82.4
630	74.9	76.6	76.5	80.1	82.5	84.6	86.2	87.6	88.6	86.9	79.7
800	74.3	75.9	77.8	79.5	81.8	83.9	85.1	85.6	86.2	84.3	76.2
1000	73.7	75.5	77.6	79.2	81.9	83.7	84.6	84.5	84.2	81.6	72.9
1250	72.9	75.1	77.1	78.9	81.3	83.2	83.9	83.3	82.6	79.7	70.6
1600	70.5	73.8	76.4	78.2	80.6	82.1	82.2	81.4	80.0	76.0	65.9
2000	69.4	72.7	75.5	77.2	79.6	81.2	80.8	79.1	77.5	73.6	61.8
2500	67.4	71.3	73.8	75.8	78.4	79.6	78.7	77.4	74.7	69.3	57.2
3150	64.4	68.8	71.5	73.7	75.7	77.6	75.7	74.1	71.6	64.7	50.5
4000	61.7	65.9	69.1	71.2	73.5	73.8	72.3	70.2	66.7	59.2	43.0
5000	58.7	63.4	67.3	69.3	72.0	72.2	70.6	67.7	63.6	56.7	38.4
6300	54.2	59.1	63.4	65.7	68.0	68.5	66.0	63.1	58.2	49.2	28.6
8000	48.7	53.7	57.9	60.0	63.0	63.0	60.5	57.5	51.4	41.1	17.8
10000	38.8	44.1	48.9	51.5	53.7	53.4	50.5	46.5	38.6	25.1	0.0
OASPL	88.6	89.1	90.4	91.9	94.0	95.4	96.8	99.5	102.9	102.6	97.6
PNL	94.4	97.1	99.3	101.1	103.4	104.8	104.8	105.6	107.5	106.3	99.9
400. SIDELINE											
PNL	107.3	109.9	112.1	113.9	116.3	117.7	117.8	118.3	119.2	118.2	112.0
2000. SIDELINE											
PNL	88.2	89.9	92.2	93.9	96.2	97.6	97.9	99.3	101.4	100.3	93.6
4000. SIDELINE											
PNL	78.7	80.2	81.9	83.6	85.0	87.3	88.2	90.6	92.5	93.3	84.0
6000. SIDELINE											
PNL	72.8	74.0	75.6	77.4	79.5	81.0	81.9	84.2	87.6	85.6	77.5

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Cutback Scalloped Mixer Modified to Fit Within 7.6 Inch Engine Extension Without Engine Secondary Flow Simulation; Configuration 8A; Condition 7601

a.) Model Data Measured At 15 Ft. Radius

STAND [illegible] RIG [illegible] TEST DATE [illegible] SCALE RATIO [illegible] RUN NUMBER [illegible] CONDITION [illegible]

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S	[illegible]	[illegible]	KG/S	[illegible]	[illegible]
P.R.		1.32	1.36		1.32	1.36	THRUST,IDL LB			N		
TEMP	(R)	[illegible]	[illegible]	(K)	[illegible]	[illegible]	THRUST,MEA LB		[illegible]	N		[illegible]
RHO	LB/FT3	[illegible]	[illegible]	KG/M3	[illegible]	[illegible]	AREA (MOD) SQFT			SQM		
VEL	FPS	[illegible]	[illegible]	M/S	[illegible]	[illegible]	W (MODEL) LB/S	[illegible]	[illegible]	KG/S	[illegible]	[illegible]

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL — [illegible]

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PWL dB-[illegible]
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.125	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.160	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.200	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.315	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.400	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.630	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.800	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.60	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3.15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6.30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
12.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
40.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
50.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
63.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
80.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
100.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
												LEVEL = [illegible]
OASPL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND [illegible] RIG [illegible] TEST DATE [illegible] SCALE RATIO [illegible] RUN NUMBER [illegible] CONDITION [illegible]

		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW LB/S	[illegible]	[illegible]	KG/S	[illegible]	[illegible]
P.R.		1.32	1.36		[illegible]	1.36	THRUST,IDL LB			N		
TEMP	(R)	[illegible]	[illegible]	(K)	[illegible]	[illegible]	THRUST,MEA LB		[illegible]	N		[illegible]
RHO	LB/FT3	[illegible]	[illegible]	KG/M3	[illegible]	[illegible]	AREA (MOD) SQFT			SQM		
VEL	FPS	[illegible]	[illegible]	M/S	[illegible]	[illegible]	W (MODEL) LB/S	[illegible]	[illegible]	KG/S	[illegible]	[illegible]

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
63	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
80	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
100	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
125	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
160	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
200	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
315	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
400	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
630	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
800	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1600	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3150	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6300	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OASPL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PNL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
400. SIDELINE											
PNL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2000. SIDELINE											
PNL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4000. SIDELINE											
PNL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6000. SIDELINE											
PNL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Cutback Scalloped Mixer Modified to Fit Within 7.6 Inch Engine Extension Without Engine Secondary Flow Simulation; Configuration 8A; Condition 7602

a.) Model Data Measured At 15 Ft. Radius

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		1.66	1.67		1.66	1.67
TEMP	(R)	1313.0	621.0	(K)	729.4	345.0
RHO	LB/FT3	0.033	0.077	KG/M3	0.536	1.149
VEL	FPS	1290.6	880.3	M/S	396.6	268.3

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	78.0	76.9	76.9	79.2	76.0	79.4	81.0	83.7	85.2	88.0	92.5
.125	76.0	79.4	79.0	79.5	79.9	81.5	86.7	85.9	87.8	90.5	93.2
.160	76.1	79.6	78.1	79.7	76.6	79.6	81.1	83.1	87.7	92.1	90.9
.200	76.3	76.0	79.9	81.5	81.0	83.1	84.8	87.2	91.7	96.1	98.9
.250	77.3	79.3	80.1	82.5	82.6	84.0	85.8	88.9	93.0	97.3	99.0
.315	80.2	81.7	82.0	84.1	84.5	85.9	88.0	91.0	95.0	99.6	103.0
.400	82.3	84.2	85.0	87.5	86.1	89.7	91.5	94.7	98.0	102.7	105.7
.500	84.8	85.1	85.3	87.5	87.6	89.5	91.5	95.0	100.0	103.3	103.3
.630	86.4	86.6	87.0	86.9	89.4	91.0	93.1	96.9	100.1	103.9	105.1
.800	85.1	86.0	86.3	88.0	89.5	91.1	93.1	96.0	100.2	102.6	101.7
1.00	85.2	86.3	87.0	89.7	90.4	92.1	94.4	97.1	99.0	101.3	100.1
1.25	85.0	86.6	87.6	89.7	90.7	92.6	94.7	97.5	99.2	98.9	96.4
1.60	85.4	86.0	86.0	88.4	90.0	92.9	94.0	97.4	98.3	97.7	94.1
2.00	85.0	87.1	88.0	90.2	91.3	93.2	95.0	97.1	97.6	95.0	92.1
2.50	85.4	87.6	88.0	89.9	91.0	93.7	95.3	97.1	97.8	95.6	91.7
3.15	85.9	87.6	88.0	91.0	91.8	93.6	95.4	96.4	95.9	93.6	90.0
4.00	86.5	87.9	88.9	91.1	91.2	93.9	95.6	96.3	95.0	92.7	89.3
5.00	86.9	87.6	88.5	91.6	92.1	93.7	95.2	95.6	94.3	91.7	88.0
6.30	86.6	87.5	88.0	90.9	92.0	93.7	95.1	95.0	93.7	91.3	87.0
8.00	85.2	87.5	88.5	90.9	92.1	93.1	94.0	94.6	93.3	90.0	86.0
10.0	86.7	86.9	87.9	90.4	91.6	93.3	94.3	93.8	92.5	90.1	85.6
12.5	84.5	86.2	87.5	89.9	91.3	93.0	93.5	92.7	91.3	89.2	84.7
16.0	83.9	85.9	86.6	89.3	90.9	92.3	92.7	91.9	90.2	88.1	83.0
20.0	81.9	84.2	85.3	[illegible]	89.0	90.9	90.9	90.3	88.2	85.9	80.3
25.0	80.7	83.2	84.6	87.1	88.1	89.9	89.8	88.0	86.6	83.7	78.3
31.5	78.8	81.1	83.0	85.9	87.6	87.9	88.0	86.3	84.2	81.5	76.1
40.0	77.0	79.[illegible]	81.3	83.6	85.7	86.1	85.7	84.3	81.0	79.0	73.9
50.0	76.0	76.6	78.0	80.9	83.3	83.1	82.8	81.0	79.0	76.3	72.7
63.0	71.2	73.9	75.1	77.5	79.9	79.7	79.2	77.9	75.2	73.2	71.0
80.0	67.0	69.3	71.5	73.1	77.0	76.1	75.3	73.9	71.7	70.1	70.9
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	98.2	99.7	100.7	[illegible]	106.0	105.6	107.1	108.6	110.1	111.4	112.9

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		1.66	1.67		1.66	1.67
TEMP	(R)	1313.0	621.0	(K)	729.4	345.0
RHO	LB/FT3	0.033	0.077	KG/M3	0.536	1.149
VEL	FPS	1290.6	890.3	M/S	396.6	268.3

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	57.7	59.6	56.6	62.0	63.1	64.1	65.5	68.2	70.2	72.6	72.2
63	59.0	62.6	64.7	66.2	6[illegible].7	67.9	69.0	71.1	73.6	75.3	74.9
80	62.1	63.3	63.9	66.2	66.7	67.7	69.0	71.4	74.0	75.9	72.5
100	63.7	64.7	65.5	67.5	67.9	69.1	70.4	73.1	74.7	76.3	73.9
125	62.4	64.7	64.0	67.0	66.0	69.2	70.4	72.0	74.0	75.0	70.5
160	62.4	64.2	65.4	66.7	68.0	70.0	71.6	73.4	74.3	73.4	68.0
200	62.2	64.5	66.6	68.2	69.1	70.5	71.9	73.6	73.7	71.6	64.9
250	62.5	64.6	66.3	66.4	69.1	70.7	71.7	73.1	72.6	69.6	62.5
315	61.8	6[illegible].9	66.0	68.4	69.3	70.8	71.8	72.7	71.3	67.2	59.6
400	62.3	65.1	66.5	69.0	69.7	71.2	72.2	72.6	70.9	66.2	56.0
500	62.3	64.0	66.5	68.9	69.5	70.0	71.0	71.0	69.3	64.4	56.[illegible]
630	62.7	64.9	66.4	68.7	69.7	70.9	71.0	71.2	68.3	63.0	55.3
800	62.7	64.2	65.6	68.3	69.2	70.3	71.0	69.9	66.0	61.3	52.7
1000	61.9	63.7	65.3	67.7	68.7	69.9	70.4	68.9	65.5	60.0	50.4
1250	60.0	63.2	64.7	67.3	68.3	69.5	69.0	67.9	64.4	58.6	48.6
1600	58.6	61.0	63.4	66.1	67.1	68.2	68.2	65.9	62.6	52.3	45.3
2000	57.5	60.3	62.2	64.8	66.0	67.1	66.5	64.6	60.0	53.8	42.0
2500	55.7	58.4	60.3	63.2	64.6	65.3	64.5	62.8	57.2	50.5	37.0
3150	52.2	55.0	57.7	60.8	61.0	62.6	61.2	58.1	53.1	45.1	30.0
4000	49.6	53.0	55.3	58.1	59.3	59.2	58.1	53.9	48.7	39.5	22.4
5000	46.3	50.3	53.1	55.0	57.7	57.1	55.5	51.2	45.6	35.6	17.3
6300	42.1	46.3	49.4	52.0	53.8	53.1	50.8	46.3	39.0	28.1	7.4
8000	37.0	41.0	44.2	46.5	48.9	47.5	45.0	40.2	31.8	19.4	0.0
10000	26.6	31.0	35.3	36.0	39.4	38.1	34.6	20.6	10.2	1.2	0.0
OASPL	74.1	76.3	77.6	80.1	80.8	82.1	82.9	83.7	83.9	83.5	80.7
PNL	81.3	84.1	85.0	88.6	89.7	90.6	90.5	89.5	87.6	84.7	78.4
600. SIDELINE PNL	94.5	97.1	98.7	101.4	102.6	103.5	103.5	102.4	100.[illegible]	96.7	91.3
2000. SIDELINE PNL	74.0	77.6	78.8	81.4	82.4	83.4	83.4	83.1	81.1	77.6	71.7
4000. SIDELINE PNL	64.0	66.9	68.6	71.3	72.1	73.2	73.6	7[illegible].4	71.5	68.0	61.0
6000. SIDELINE PNL	57.5	60.6	62.3	65.0	65.7	66.9	67.3	67.1	65.5	61.9	55.6

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absc..ption present on an FAA day (. ,°F, 70% RH)

AD-A057 310 PRATT AND WHITNEY AIRCRAFT GROUP EAST HARTFORD CONN F/G 20/1
INTERNAL MIXER INVESTIGATION FOR JT8D ENGINE JET NOISE REDUCTIO--ETC(U)
DEC 77 A B PACKMAN, D C EILER DOT-FA76WA-3809
UNCLASSIFIED PWA-5582-VOL-2 FAA-RD-77-132-2 NL

2 OF 2
AD
A057310

END
DATE
FILMED
9-78
DDC

Cutback Scalloped Mixer Modified to Fit Within 7.6 Inch Engine Extension Without Engine Secondary Flow Simulation; Configuration 8A; Condition 7603

a.) Model Data Measured At 15 Ft. Radius

STAND A7U6 RIG 10 705307 TEST DATE 01/20/77 SCALE RATIO 7.0/1 RUN NUMBER [illegible] CONDITION 7603

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		2.04	2.41		2.04	2.41
TEMP	(R)	1303.0	633.0	(K)	746.1	350.0
RHO	LB/FT3	0.039	0.081	KG/M3	0.624	1.299
VEL	FPS	2052.0	1290.0	M/S	625.5	393.9

MASS FLOW LB/S, THRUST,IDEAL LB, THRUST,MEA LB, AREA (MODEL) SQFT, W (MODEL) LB/S: [illegible]

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (MODEL)

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	[illegible]
.050	0.0	[illegible]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.100	73.1	76.2	78.1	80.2	79.6	80.5	81.6	86.7	88.2	90.3	94.6	[illegible]
.125	76.6	81.1	80.6	81.1	81.4	82.0	81.6	85.6	89.0	92.2	96.7	[illegible]
.160	78.1	81.2	79.7	81.1	79.9	80.5	81.9	86.3	88.9	93.5	[illegible]	[illegible]
.200	77.6	78.8	80.6	[illegible]	82.8	84.2	86.0	88.3	93.2	97.7	99.7	[illegible]
.250	78.6	80.7	81.2	[illegible]	84.1	85.2	87.1	90.2	94.4	98.9	100.7	[illegible]
.315	81.5	87.6	83.2	85.4	85.9	87.0	89.4	93.4	96.9	101.3	104.1	[illegible]
.400	83.6	85.6	86.7	87.1	89.4	91.6	92.0	96.3	100.5	104.6	107.	[illegible]
.500	86.7	86.6	86.9	87.0	89.1	91.6	93.6	96.6	101.8	105.9	105.5	[illegible]
.630	87.0	88.2	88.6	90.6	90.6	92.3	94.8	98.3	102.6	106.6	107.3	[illegible]
.800	86.7	88.1	87.8	90.8	91.2	92.4	94.5	98.3	102.1	105.1	106.3	[illegible]
1.00	[illegible]	87.6	88.4	91.1	92.6	93.6	95.7	98.9	101.5	103.6	103.6	[illegible]
1.25	86.6	87.9	89.0	91.2	[illegible]	94.1	96.3	99.3	101.6	101.3	96.8	[illegible]
1.60	86.8	88.1	89.1	91.4	[illegible]	94.6	[illegible]	99.6	100.8	100.1	96.7	[illegible]
2.00	86.5	88.7	89.3	91.7	92.7	94.7	96.7	99.2	99.1	97.9	94.9	[illegible]
2.50	87.6	89.1	89.9	92.4	93.3	95.3	97.2	98.9	98.0	97.1	93.7	[illegible]
3.15	87.3	89.6	90.6	92.6	93.3	95.2	97.2	98.3	97.8	[illegible]	92.2	[illegible]
4.00	87.9	89.2	90.2	92.6	93.7	95.5	97.3	98.0	96.9	94.8	91.3	[illegible]
5.00	88.3	89.6	89.8	92.6	93.5	95.4	96.4	97.7	96.1	[illegible]	89.9	[illegible]
6.30	88.6	88.9	89.9	92.6	93.6	95.3	96.9	96.9	95.6	93.6	89.0	[illegible]
8.00	88.9	88.9	90.0	92.4	93.6	95.5	96.5	96.5	95.3	93.2	88.7	[illegible]
10.0	88.3	88.3	89.4	92.3	93.3	94.9	96.0	95.8	94.4	92.6	88.6	[illegible]
12.5	88.2	87.6	89.2	91.7	93.1	94.0	95.3	94.8	93.6	91.8	87.6	[illegible]
16.0	85.5	87.6	88.1	91.2	92.6	94.1	94.6	94.0	92.4	95.7	85.4	[illegible]
20.0	83.5	85.5	87.6	[illegible]	91.3	92.6	92.4	92.1	90.4	88.4	82.8	[illegible]
25.0	82.3	84.9	86.3	89.0	90.3	91.6	[illegible]	90.2	88.8	86.5	80.7	[illegible]
31.5	80.5	82.7	84.8	87.3	89.5	89.8	90.3	88.3	86.2	84.2	78.6	[illegible]
40.0	78.6	80.7	83.1	85.3	87.4	88.6	87.8	86.3	84.0	81.7	76.4	[illegible]
50.0	76.1	78.3	80.3	82.3	85.6	86.6	86.6	83.3	81.6	78.8	75.4	[illegible]
63.0	77.6	76.7	77.1	79.1	81.2	81.2	81.3	80.2	77.2	75.6	76.6	[illegible]
80.0	68.5	76.7	73.2	76.9	77.6	77.5	77.2	76.7	73.7	77.5	73.6	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
OASPL	99.7	101.1	102.1	[illegible]	105.6	[illegible]	108.7	[illegible]	111.9	114.1	114.5	

[illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND A7U6 RIG 10 705307 TEST DATE 01/20/77 SCALE RATIO 7.0/1 RUN NUMBER [illegible] CONDITION 7603

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		2.04	2.40		2.04	2.41
TEMP	(R)	1303.0	631.0	(K)	746.1	350.6
RHO	LB/FT3	0.039	0.081	KG/M3	0.624	1.299
VEL	FPS	2052.0	1290.0	M/S	625.5	395.9

MASS FLOW LB/S, THRUST,IDEAL LB, THRUST,MEA LB, AREA (MODEL) SQFT, W (MODEL) LB/S: [illegible] 9.5 [illegible] 14 15

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	59.6	60.0	61.0	64.1	64.5	65.7	66.9	69.0	71.7	73.9	74.6
63	61.1	63.0	65.5	67.0	68.0	69.2	70.6	72.1	75.3	77.4	76.9
80	63.7	64.0	65.5	67.7	67.7	69.7	70.5	73.0	76.0	78.5	76.7
100	63.1	66.3	67.1	69.2	69.1	70.4	72.1	74.7	76.6	78.0	76.3
125	64.0	66.2	66.3	69.4	69.7	70.5	73.0	74.5	76.7	77.5	73.8
160	64.0	65.5	66.8	69.6	70.4	71.5	72.9	75.6	76.6	75.7	71.5
200	65.0	65.6	67.4	69.7	70.5	72.0	73.5	75.4	75.5	73.4	67.3
250	63.9	65.9	67.6	69.8	[illegible]	72.2	73.6	74.9	74.3	72.6	64.9
315	63.3	66.3	[illegible]	69.9	[illegible]	72.3	73.5	74.0	73.6	69.3	61.9
400	[illegible]	66.6	67.3	70.5	71.2	72.0	73.9	74.4	72.6	66.3	60.8
500	63.7	66.2	67.7	70.5	71.0	72.4	73.6	73.5	71.2	66.5	58.7
630	64.1	66.2	67.7	70.2	71.7	72.3	73.5	72.9	70.0	65.1	57.1
800	64.6	65.6	66.6	[illegible]	70.6	72.0	72.7	71.7	68.6	63.6	54.6
1000	63.3	65.1	66.6	69.4	70.3	71.5	72.2	70.8	67.4	62.3	52.4
1250	61.7	64.0	66.2	68.8	69.0	71.7	71.3	69.0	66.4	61.6	50.7
1600	60.2	63.2	64.9	67.0	68.8	69.8	69.9	[illegible]	64.3	58.8	47.7
2000	59.2	61.7	[illegible]	66.6	67.8	68.9	68.3	66.1	62.3	56.4	44.3
2500	57.3	60.6	62.0	65.1	66.3	67.3	66.6	63.9	59.4	53.1	39.4
3150	55.0	57.2	59.4	62.	63.7	64.3	63.2	60.3	55.3	48.6	32.3
4000	50.6	54.7	57.0	60.0	61.0	60.8	59.9	56.1	50.9	42.3	24.8
5000	48.0	[illegible]	54.9	57.7	59.6	59.6	57.0	53.7	47.0	38.3	19.8
6300	43.7	[illegible]	51.2	53.7	55.5	[illegible]	52.9	48.3	41.2	36.0	9.9
8000	38.3	[illegible]	45.9	48.3	50.6	49.2	47.0	42.1	33.8	21.9	0.0
10000	28.2	31.1	37.1	39.6	41.2	39.6	36.7	30.9	[illegible]	5.6	3.6
OASPL	75.6	77.7	79.0	81.6	82.3	83.6	84.8	85.5	85.7	85.9	82.9
PNL	82.9	85.6	87.4	90.3	91.4	92.3	92.6	91.4	89.5	86.9	81.1

400. SIDELINE PNL	[illegible]	98.6	100.3	103.1	104.3	[illegible]	105.4	104.4	102.1	99.2	[illegible]
2000. SIDELINE PNL	75.6	78.4	80.3	83.1	84.1	85.1	85.2	85.0	83.0	80.3	74.6
4000. SIDELINE PNL	65.5	68.4	70.1	72.9	73.7	74.8	75.4	75.3	73.5	[illegible]	64.6
6000. SIDELINE PNL	59.1	62.1	63.8	66.6	67.3	68.	69.1	69.0	67.5	64.6	58.3

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Cutback Scalloped Mixer Modified to Fit Within 7.6 Inch Engine Extension Without Engine Secondary Flow Simulation; Configuration 8A; Condition 7604

a.) Model Data Measured At 15 Ft. Radius

	PRIMARY	FAN		PRIMARY	FAN
AREA SQFT			SQM		
P.R.	1.73	1.69		1.73	1.69
TEMP (R)	1405.0	649.0	(K)	780.6	360.6
RHO (LB/FT3)	0.033	0.071	KG/M3	0.525	1.144
VEL FPS	1573.4	1044.6	M/S	479.6	318.3

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0 FT RADIUS — RAW CORRECTED SPL

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	79.3	80.9	82.9	84.7	83.9	84.2	85.9	88.8	90.5	94.6	98.7
.125	80.2	84.7	84.1	85.0	85.0	87.0	85.0	89.2	93.2	96.3	99.3
.160	83.6	85.0	84.0	85.2	84.2	89.0	88.3	88.6	93.3	98.2	101.6
.200	82.4	83.6	84.9	88.5	87.1	88.4	90.4	92.9	97.7	102.6	104.0
.250	84.2	84.7	85.9	88.0	88.3	89.2	91.1	94.9	99.5	104.2	106.0
.315	86.1	86.6	87.4	89.7	89.9	91.4	94.6	98.6	102.3	108.6	110.3
.400	88.0	89.0	91.0	92.9	93.7	95.5	97.6	101.8	105.0	110.5	113.1
.500	90.1	91.2	91.7	93.4	93.6	95.4	98.0	102.1	108.0	112.0	111.4
.630	92.4	93.4	93.3	95.3	95.6	96.9	99.9	104.3	108.0	112.3	114.6
.800	92.2	93.7	93.2	95.9	96.4	97.4	99.0	104.2	109.2	111.1	112.6
1.00	92.7	93.3	93.9	96.1	97.1	99.6	101.5	105.2	108.6	112.1	112.0
1.25	92.0	93.5	94.0	96.4	97.3	99.1	101.9	105.4	107.0	109.4	109.0
1.60	92.1	93.4	94.4	96.4	97.3	99.3	102.6	105.1	106.7	107.6	107.6
2.00	91.4	93.3	94.2	96.5	97.5	99.5	102.4	105.3	105.7	105.2	103.0
2.50	91.0	93.7	94.0	97.0	98.1	100.2	102.9	104.9	105.3	104.9	102.5
3.15	92.1	93.7	94.9	97.2	98.3	100.3	103.6	104.5	104.1	102.6	100.0
4.00	92.7	94.0	95.2	97.5	98.6	100.7	103.2	104.3	103.3	101.8	99.0
5.00	92.9	93.0	95.0	97.4	98.8	100.0	102.0	103.5	102.7	100.8	98.7
6.30	92.9	94.6	95.6	97.7	99.0	100.9	103.1	103.4	102.3	100.6	98.4
8.00	91.7	94.0	95.1	97.4	99.0	100.9	102.6	103.6	102.1	100.4	97.6
10.0	91.3	93.5	94.7	97.3	99.0	100.7	102.2	102.5	101.6	100.2	97.2
12.5	91.2	93.0	94.5	97.1	98.6	100.5	101.7	103.0	100.9	99.3	96.4
16.0	90.5	92.1	93.5	96.7	98.3	100.1	101.1	101.1	100.1	98.6	94.1
20.0	88.7	91.1	92.5	95.6	97.2	96.7	99.5	99.3	98.6	96.5	91.5
25.0	87.4	90.2	91.0	94.7	96.3	97.2	98.1	97.4	97.6	94.3	89.4
31.5	85.6	88.2	90.4	93.4	95.7	96.1	96.9	95.8	94.6	92.5	87.6
40.0	83.7	86.2	88.4	91.3	93.6	94.2	94.6	93.6	92.2	90.0	84.2
50.0	81.4	83.4	85.7	88.2	91.1	91.3	91.6	91.4	89.4	87.3	82.6
63.0	77.9	80.1	82.5	85.1	87.4	87.5	88.3	87.3	85.6	84.1	81.1
80.0	73.6	76.1	78.0	80.0	83.6	83.0	84.2	83.5	81.9	80.7	79.2
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OASPL	104.7	106.2	107.2	109.6	110.8	112.5	114.6	116.5	118.5	121.0	121.4

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

	PRIMARY	FAN		PRIMARY	FAN
AREA SQFT			SQM		
P.R.	1.73	1.69		1.73	1.69
TEMP (R)	1405.0	649.0	(K)	780.6	360.6
RHO (LB/FT3)	0.033	0.071	KG/M3	0.525	1.144
VEL FPS	1573.4	1044.6	M/S	479.6	318.3

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	63.6	66.0	66.0	68.4	68.5	69.6	71.5	74.6	77.1	79.2	79.5
63	65.5	67.6	69.6	71.6	72.3	73.7	75.1	77.5	80.8	82.9	82.3
80	68.2	69.4	70.3	72.1	72.2	73.6	75.5	78.5	82.0	84.6	86.6
100	70.7	71.5	72.4	74.1	74.1	75.6	77.2	80.5	83.6	85.7	87.0
125	69.5	71.8	71.7	74.5	74.9	75.5	77.1	80.4	83.0	83.5	84.0
160	69.9	71.2	72.3	74.6	75.5	76.9	78.7	81.3	83.1	84.2	81.1
200	69.6	71.4	73.0	74.9	75.7	77.0	79.1	81.5	82.3	81.5	78.1
250	69.2	71.2	72.7	74.0	75.6	77.1	79.1	81.0	81.0	79.5	75.2
315	68.2	70.9	72.2	74.7	75.5	77.1	79.2	80.9	79.6	76.6	71.3
400	68.5	71.2	72.7	75.1	76.0	77.7	79.6	80.4	79.1	75.1	69.4
500	68.5	70.9	72.6	75.1	76.0	77.5	[illegible]	79.7	77.5	73.4	67.3
630	68.9	71.6	72.7	75.1	76.3	77.7	79.4	79.2	76.4	72.1	65.6
800	68.7	70.4	72.1	74.7	75.9	77.4	78.6	78.6	75.2	70.4	63.4
1000	68.2	70.2	71.7	74.5	75.7	77.1	78.4	77.3	74.1	69.3	61.5
1250	66.5	69.7	71.3	74.0	75.2	76.6	77.4	76.3	73.2	68.2	59.0
1600	65.2	68.4	70.2	73.6	74.5	75.6	76.1	74.0	71.5	66.4	56.9
2000	64.2	67.1	69.2	72.0	73.3	74.6	74.7	73.1	69.6	64.1	53.3
2500	62.3	65.1	67.2	70.6	72.0	73.2	72.9	71.6	67.1	61.0	48.1
3150	59.0	62.0	64.9	68.3	69.6	70.4	69.0	67.5	63.5	55.0	41.2
4000	55.7	60.0	62.5	65.7	67.0	67.0	66.4	63.3	59.1	50.3	33.5
5000	53.1	57.4	60.5	63.7	65.0	65.3	64.4	60.7	55.0	44.6	20.2
6300	48.0	53.2	56.5	59.7	61.7	61.2	59.7	55.0	49.4	39.1	17.7
8000	43.6	47.0	51.3	54.2	56.7	55.7	53.0	49.0	42.2	34.4	0.0
10000	33.3	38.5	42.5	45.6	47.6	45.9	43.7	30.0	20.0	14.1	0.0
OASPL	80.7	82.7	84.1	86.6	87.5	88.0	90.3	91.5	92.3	92.9	89.0
PNL	88.1	90.9	92.8	95.7	97.0	98.0	98.6	98.0	96.5	94.6	89.5

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
600. SIDELINE PNL	101.2	103.6	105.4	108.5	109.0	111.0	111.6	111.6	109.5	106.7	101.6
2000. SIDELINE PNL	80.0	83.7	85.7	88.5	89.6	90.7	91.3	91.4	90.2	88.5	83.2
4000. SIDELINE PNL	70.7	73.6	75.4	78.0	79.0	80.2	81.4	81.7	80.6	79.1	73.5
6000. SIDELINE PNL	64.4	67.3	69.1	71.7	72.6	73.0	75.1	75.4	74.0	73.2	67.1

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Cutback Scalloped Mixer Modified to Fit Within 7.6 Inch Engine Extension Without Engine Secondary Flow Simulation; Configuration 8A; Condition 7605

a.) Model Data Measured At 15 Ft. Radius

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Cutback Scalloped Mixer Modified to Fit Within 7.6 Inch Engine Extension Without Engine Secondary Flow Simulation; Configuration 8A; Condition 7606

a.) Model Data Measured At 15 Ft. Radius

[illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

[illegible]

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Cutback Scalloped Mixer Modified to Fit Within 7.6 Inch Engine Extension Without Engine Secondary Flow Simulation; Configuration 8A; Condition 7607

a.) Model Data Measured At 15 Ft. Radius

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

b.) Model Data Scaled to Predict *JT8D* Engine *Jet Noise* At *1200* Ft. Linear Distance

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Cutback Scalloped Mixer Modified to Fit Within 7.6 Inch Engine Extension Without Engine Secondary Flow Simulation; Configurstion 8A; Condition 7608

a.) Model Data Measured At 15 Ft. Radius

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PWL
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.100	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.125	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.160	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.200	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.315	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.400	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.630	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.800	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

OASPL [illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OASPL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PNL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

400. SIDELINE

PNL [illegible]

2000. SIDELINE

PNL [illegible]

4000. SIDELINE

PNL [illegible]

6000. SIDELINE

PNL [illegible]

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Cutback Scalloped Mixer Modified to Fit Within 7.6 Inch Engine Extension Without Engine Secondary Flow Simulation; Configuration 8A; Condition 7609

a.) Model Data Measured At 15 Ft. Radius

```
STAND A204   RIG 10 POSSOT   TEST DATE 01/20/77   SCALE RATIO  7.0/1   RUN NUMBER 20076  CONDITION  7609
                 PRIMARY   FAN            PRIMARY   FAN                        PRIMARY  FAN           PRIMARY  FAN
AREA    SQFT                      SQM                      MASS FLOW  LB/S    0.0      0.0  KG/S      0.0     0.0
P.R.            2.03     1.99             2.13     1.99    THRUST.IDL  LB                  N
TEMP     (R) 1616.0    697.0       (K)  898.7    387.2    THRUST.MEA  LB          6.0      N               6.0
DENS LB/FT3    0.030    0.070  KG/M3    0.486    1.116    AREA (MOD) SQFT                 SQM
VEL      FPS 1995.4   1225.4     M/S    590.0    373.5    W (MODEL)  LB/S    3.2      3.0  KG/S      1.5     1.4
```

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (MODEL)

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PWL 60-170
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	82.5	85.7	87.3	87.0	88.5	89.3	90.3	93.2	95.2	99.2	103.3	115.4
.125	84.7	89.0	87.9	88.8	91.1	91.9	90.6	93.7	97.9	101.2	104.2	117.1
.160	89.0	91.6	88.0	89.2	88.0	89.5	91.0	93.0	96.7	103.1	106.4	110.7
.200	87.2	87.6	88.4	90.5	97.1	93.2	95.0	97.2	102.0	107.5	110.0	[illegible]
.250	88.3	89.2	90.1	92.2	93.2	94.6	95.9	99.5	104.8	109.6	111.7	123.0
.315	90.5	90.6	92.0	93.7	94.5	96.3	98.5	103.1	107.6	112.1	115.9	127.0
.400	92.0	94.0	95.0	96.8	98.3	100.0	102.1	106.4	111.0	115.0	118.5	130.4
.500	95.0	95.7	96.2	97.3	98.2	100.3	103.0	107.5	114.2	118.1	117.1	133.7
.630	96.0	97.0	98.4	100.0	100.5	102.3	105.2	110.3	115.7	119.0	119.4	135.5
.800	97.3	99.0	98.6	100.7	101.0	102.0	105.3	111.6	117.2	120.5	118.1	136.2
1.00	98.4	99.4	99.6	101.5	103.0	105.2	107.7	112.0	117.4	120.4	120.3	136.9
1.25	99.6	100.3	101.0	102.5	103.8	105.4	108.1	112.1	116.7	119.8	119.5	136.3
1.60	99.8	101.0	101.4	102.4	103.8	106.5	108.4	111.9	115.6	119.6	119.1	136.6
2.00	99.4	100.5	100.9	102.4	103.9	106.1	108.9	111.8	114.3	118.0	117.9	136.4
2.50	98.8	100.3	100.9	102.7	104.2	106.6	109.3	111.6	113.5	116.0	117.3	135.4
3.15	98.9	100.1	101.0	102.6	104.3	106.6	109.5	111.5	112.5	115.7	115.8	135.7
4.00	98.7	100.1	100.9	102.9	104.8	107.4	109.8	111.7	111.8	115.0	114.4	135.3
5.00	98.9	99.6	100.	102.8	104.9	107.4	109.5	110.5	111.3	114.3	112.8	134.0
6.30	98.8	99.8	100.9	103.6	105.1	107.7	109.7	110.3	111.2	114.1	111.7	134.7
8.00	97.4	99.8	102.3	103.0	105.4	108.1	109.6	110.1	111.3	113.6	111.6	134.0
10.0	98.9	99.4	100.7	102.0	105.3	107.7	109.1	109.5	110.8	112.8	110.6	133.6
12.5	98.8	98.0	100.5	102.4	105.5	107.8	108.8	109.6	110.2	111.7	108.7	129.5
16.0	95.9	97.0	99.0	102.1	103.0	107.2	108.6	108.2	109.2	110.1	107.6	128.7
20.0	96.2	96.8	98.7	100.6	103.0	105.9	106.6	106.6	107.6	108.6	105.9	127.2
25.0	92.0	96.0	98.1	99.6	102.8	104.6	105.4	104.9	106.2	106.0	102.7	125.9
31.5	91.7	94.1	96.9	97.6	102.6	103.5	106.1	103.0	104.6	105.3	100.9	[illegible]
40.0	89.5	92.3	95.2	95.6	100.9	103.9	102.2	102.6	102.5	103.1	98.4	122.7
50.0	87.2	89.6	92.5	91.2	98.5	99.2	99.5	99.6	100.1	100.7	96.5	120.1
63.0	84.0	86.6	89.3	88.8	93.1	96.1	96.6	96.8	97.1	98.0	94.7	117.1
80.0	79.0	82.6	85.7	81.4	91.6	92.7	93.6	93.6	94.2	95.2	92.3	113.9
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OSPL	116.7	117.2	118.2	119.8	[illegible]	119.2	121.1	123.2	126.5	129.9	129.5	

CAPWL = [illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

```
STAND A204   RIG 1C POSSOT   TEST DATE 01/20/77   SCALE RATIO  7.0/1   RUN NUMBER 20076  CONDITION  7609
                 PRIMARY   FAN            PRIMARY   FAN                        PRIMARY  FAN           PRIMARY  FAN
AREA    SQFT                      SQM                      MASS FLOW  LB/S   157.3    147.0  KG/S     71.3    66.7
P.R.            2.03     1.99             2.13     1.99    THRUST.IDL  LB                  N
TEMP     (R) 1616.0    697.6       (K)  898.7    387.2    THRUST.MEA  LB          0.0      N               0.0
DENS LB/FT3    0.030    0.070  KG/M3    0.400    1.116    AREA (MOD) SQFT                 SQM
VEL      FPS 1995.4   1225.4     M/S    590.6    373.5    W (MODEL)  LB/S    3.2      3.0  KG/S      1.5     1.4
```

FAA DAY — 1/3 OCTAVE BAND — 1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	80.0	68.0	73.6	77.6	73.1	76.5	76.0	79.5	82.6	84.7	85.1
63	76.3	72.2	73.6	75.5	76.9	78.2	79.0	87.0	86.0	88.6	87.7
80	73.1	73.9	76.8	76.8	76.5	78.5	80.5	83.9	89.6	90.7	86.3
100	75.3	75.9	76.9	78.6	79.6	80.8	87.5	86.5	90.1	97.0	88.7
125	78.6	77.1	77.1	79.3	80.3	80.9	82.6	87.2	91.8	92.9	86.9
160	75.6	77.3	78.0	80.0	81.6	83.1	84.9	88.1	91.9	92.9	88.8
200	78.2	78.2	79.4	81.6	82.7	83.3	85.3	88.2	91.2	91.9	88.0
250	76.9	78.8	79.7	80.0	82.1	84.3	85.5	87.0	89.9	91.5	87.5
315	76.2	78.1	78.9	80.6	81.9	83.7	85.7	87.6	88.2	89.6	85.6
400	75.5	77.0	78.0	80.0	82.1	84.1	86.0	87.1	87.3	88.0	84.6
500	75.3	77.3	78.7	80.5	82.6	84.0	85.9	88.7	85.9	86.5	82.3
630	74.9	77.1	78.4	80.5	82.3	84.6	86.6	86.1	84.9	85.3	80.2
800	74.3	76.2	77.9	80.1	82.0	84.0	85.3	85.0	83.0	83.9	77.5
1000	76.1	76.0	77.6	79.8	81.8	83.9	85.0	84.2	83.6	82.0	75.1
1250	72.2	75.5	77.3	79.6	81.6	83.0	84.2	83.6	82.4	81.6	73.6
1600	70.0	74.3	76.2	78.5	80.0	82.0	82.0	81.0	80.7	79.0	69.7
2000	69.0	72.9	75.2	77.3	80.6	81.9	81.0	80.3	78.9	76.3	66.6
2500	67.7	70.0	73.5	76.0	78.7	80.2	79..	78.3	76.2	72.7	61.0
3150	64.5	68.5	71.1	73.3	76.2	77.6	76.9	75.0	77.5	68.0	56.2
4000	61.3	63.0	68.0	76.6	76.6	76.4	73.7	70.0	68.3	62.6	46.0
5000	58.7	63.3	67.0	68.0	72.7	72.7	71.6	68.5	63.2	59.4	42.1
6300	54.6	59.3	63.2	68.4	69.0	68.9	67.3	64.0	59.1	57.2	31.9
8000	49.4	54.0	58.1	57.2	64.2	63.0	61.7	58.2	52.9	45.0	20.7
10000	39.4	45.0	49.3	47.3	53.1	54.5	52.0	47.5	40.1	20.0	0.0
OASPL	88.0	88.8	90.6	91.0	93.5	95.3	96.0	98.1	100.3	101.3	97.4
PNL	96.3	96.9	99.0	101.0	103.5	103.0	103.3	103.6	106.3	103.3	99.9

400. SIDELINE PNL	107.0	109.7	111.0	113.9	116.4	117.9	118.4	118.2	118.1	117.0	112.4
2000. SIDELINE PNL	87.1	89.9	93.9	93.9	96.1	97.7	98.1	98.3	98.9	99.6	93.6
4000. SIDELINE PNL	[illegible]	80.0	81.6	83.6	85.1	86.9	88.0	88.7	89.0	89.0	84.0
6000. SIDELINE PNL	71.1	73.6	75.3	77.4	78.9	80.3	81.6	82.5	84.0	83.7	77.2

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Cutback Scalloped Mixer Modified to Fit Within 7.6 Inch Engine Extension Without Engine Secondary Flow Simulation; Configuration 8A; Condition 7610

a.) Model Data Measured At 15 Ft. Radius

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PEAK
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

FAA DAY 1/3 OCTAVE BAND

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Severe Cutback Short Flowpath Mixer With Engine Secondary Flow Simulation; Configuration 10A; Condition 7801

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 705307 TEST DATE 01/26/77 SCALE RATIO 7.0/1 RUN NUMBER 2067D CONDITION 7801

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM	0.0	0.0	MASS FLOW	LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		1.31	1.36		1.31	1.36	THRUST,IDL	LB			N		
TEMP	(R)	1244.0	597.0	(K)	691.1	331.7	THRUST,MEA	LB	0.0		N		0.0
RHO	LB/FT3	0.034	0.073	KG/M3	0.553	1.165	AREA (MOD)	SQFT			SQM		
VEL	FPS	1652.9	773.5	M/S	526.9	235.8	W (MODEL)	LB/S	1.6	7.7	KG/S	0.7	3.5

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS RAW CORRECTED SPL - CHANNEL

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	PLNLM DE-0.0
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
.100	61.1	71.1	73.5	74.8	76.7	74.9	76.9	79.5	80.7	83.0	87.0	[illegible]
.125	67.0	75.4	75.6	75.3	76.6	77.2	76.5	80.4	83.6	85.7	88.3	[illegible]
.160	68.9	75.2	74.3	74.8	74.8	75.3	76.6	78.9	[illegible]	87.2	89.8	[illegible]
.200	71.3	74.1	75.7	76.0	77.8	78.8	80.7	82.6	87.3	91.3	93.0	[illegible]
.250	73.9	76.2	76.8	78.1	78.7	79.6	82.1	84.9	89.0	92.5	94.2	[illegible]
.315	77.1	78.6	78.7	79.7	80.7	81.7	84.1	87.6	90.9	94.4	97.6	[illegible]
.400	81.6	81.7	82.4	83.2	84.2	84.9	87.2	90.1	93.9	97.5	100.7	[illegible]
.500	82.9	81.4	81.6	83.1	83.8	85.3	87.5	90.3	94.9	98.3	98.6	[illegible]
.630	84.0	82.1	83.2	83.7	85.4	86.5	89.6	91.5	94.7	98.2	99.2	[illegible]
.800	84.2	81.9	82.5	84.1	85.4	86.6	88.9	91.6	94.7	97.3	96.8	[illegible]
1.00	83.5	82.0	82.9	84.4	86.0	87.4	89.7	92.0	94.4	95.4	94.5	[illegible]
1.25	83.5	82.1	83.2	84.3	86.0	87.4	89.7	91.4	93.8	93.8	90.4	[illegible]
1.60	83.5	82.2	83.2	84.3	85.9	87.6	89.7	91.6	92.8	92.2	88.5	[illegible]
2.00	83.3	82.3	83.4	84.6	86.2	87.6	89.6	91.3	91.9	90.3	85.8	[illegible]
2.50	83.4	82.7	83.7	84.9	86.6	87.8	89.6	90.9	91.0	88.8	85.4	[illegible]
3.15	83.6	82.9	83.8	85.0	86.5	87.0	89.5	90.2	89.9	87.6	83.7	[illegible]
4.00	84.5	82.0	83.9	84.9	86.7	87.6	89.3	89.5	88.7	85.9	82.7	[illegible]
5.00	84.0	82.4	83.5	84.7	86.2	87.1	88.6	88.7	87.5	84.6	81.2	[illegible]
6.30	84.1	82.3	83.4	84.4	85.2	86.9	87.2	87.8	86.4	83.4	79.4	[illegible]
8.00	82.6	82.0	83.0	84.2	86.0	86.5	87.5	86.9	85.3	82.4	78.4	[illegible]
10.0	82.5	81.6	82.9	84.1	85.8	86.8	86.8	86.6	84.2	81.3	77.6	[illegible]
12.5	82.5	82.0	84.5	87.0	88.4	87.2	86.5	84.9	82.7	79.7	75.5	[illegible]
16.0	81.8	80.3	82.5	83.1	84.2	84.9	85.1	83.8	81.5	78.3	73.4	[illegible]
20.0	80.3	79.2	80.4	81.8	83.1	83.5	83.4	82.1	79.6	76.6	71.1	[illegible]
25.0	79.2	78.4	79.9	81.2	82.5	82.5	[illegible]	80.6	78.6	74.9	70.7	[illegible]
31.5	77.6	76.5	78.5	79.8	81.9	81.2	81.2	79.2	76.6	73.5	69.6	[illegible]
40.0	75.7	74.6	76.8	77.8	79.8	79.8	79.6	77.5	74.9	72.6	69.0	[illegible]
50.0	73.6	72.4	74.3	75.1	77.5	77.3	77.1	75.9	72.9	70.6	69.6	[illegible]
63.0	70.3	69.2	71.2	72.3	73.8	73.9	74.1	74.0	70.2	69.5	70.2	[illegible]
80.0	66.4	65.6	67.6	68.6	70.5	70.4	70.6	72.2	57.4	67.8	69.7	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
OASPL	96.3	95.1	96.2	97.4	98.9	99.7	101.3	102.7	104.5	106.3	107.0	

GAPNL = [illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 705307 TEST DATE 01/26/77 SCALE RATIO 7.0/1 RUN NUMBER 2067D CONDITION 7801

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	79.9	180.0	KG/S	36.2	81.3
P.R.		1.31	1.36		1.31	1.36	THRUST,IDL	LB			N		
TEMP	(R)	1244.0	597.0	(K)	691.1	331.7	THRUST,MEA	LB	0.0		N		0.0
RHO	LB/FT3	0.034	0.073	KG/M3	0.553	1.169	AREA (MOD)	SQFT			SQM		
VEL	FPS	1652.9	773.5	M/S	526.9	235.8	W (MODEL)	LB/S	1.6	7.7	KG/S	0.7	3.5

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	54.6	56.2	57.3	58.4	59.3	59.9	61.6	64.0	65.7	67.6	66.8
63	59.3	59.9	61.0	61.9	62.0	63.1	64.7	66.5	68.7	70.3	69.9
80	60.4	59.6	60.2	61.8	62.4	63.5	65.0	66.7	69.7	70.9	67.6
100	62.1	60.2	61.7	62.3	63.9	64.6	66.3	67.7	69.3	70.6	68.8
125	61.5	60.0	61.0	62.7	63.9	64.7	66.2	67.0	69.3	69.7	65.6
160	60.7	59.9	61.3	62.9	64.4	65.3	66.9	68.1	68.9	67.5	63.0
200	60.7	60.0	61.6	62.0	64.4	65.3	66.9	68.6	68.3	65.9	58.9
250	60.6	60.0	61.5	62.7	64.2	65.6	66.0	67.5	67.1	64.1	56.7
315	60.1	59.9	61.4	62.0	64.2	65.2	66.4	66.9	65.8	61.7	53.3
400	60.1	60.2	61.6	63.6	64.3	65.3	66.3	66.4	64.8	60.6	52.5
500	60.2	60.1	61.5	62.9	64.2	65.0	65.9	65.4	63.3	58.2	50.2
630	60.7	59.8	61.4	62.5	64.2	64.0	65.5	64.4	61.0	56.2	48.5
800	60.6	59.0	60.6	62.0	63.3	63.7	64.4	63.2	60.0	54.2	45.9
1000	59.4	58.5	60.1	61.2	62.9	63.1	63.5	61.1	58.2	52.1	42.0
1250	57.6	57.7	59.2	60.6	62.2	62.2	62.3	60.2	56.4	50.2	40.4
1600	56.4	56.3	58.4	59.0	61.3	61.0	60.7	58.3	54.1	47.5	36.7
2000	55.9	56.1	59.2	61.9	63.1	61.3	59.5	56.7	51.4	44.3	32.0
2500	53.6	53.3	55.2	57.0	57.9	57.9	56.9	53.7	48.5	44.7	27.4
3150	50.6	50.9	52.0	54.5	55.5	55.2	53.7	50.3	46.5	36.2	20.8
4000	47.5	46.2	50.6	53.2	53.2	52.3	50.9	46.5	40.7	30.7	14.8
5000	45.1	45.7	48.6	50.2	57.0	50.4	48.7	44.1	37.6	27.6	10.8
6300	40.0	41.6	44.9	46.2	47.9	46.0	44.7	39.9	32.1	21.1	2.5
8000	39.0	38.0	39.9	41.1	43.1	41.7	39.3	34.5	25.7	13.7	0.0
10000	25.7	27.6	31.2	32.0	33.0	32.3	29.5	24.7	18.2	6.0	0.0
OASPL	72.3	71.7	73.2	74.5	75.9	76.4	77.5	78.0	78.5	78.1	79.3
PNL	79.4	79.3	81.6	83.5	84.9	84.3	83.9	82.9	81.6	77.4	77.4
400. SIDELINE											
PNL	92.6	92.1	94.3	96.1	97.5	97.1	96.9	95.4	93.2	90.1	84.7
2000. SIDELINE											
PNL	72.1	72.3	74.5	76.4	77.0	77.2	77.2	76.5	74.6	71.0	64.7
4000. SIDELINE											
PNL	61.9	61.9	63.7	65.3	66.7	67.0	67.5	66.9	65.1	61.5	55.0
6000. SIDELINE											
PNL	55.3	55.4	57.3	58.9	60.4	60.0	61.3	60.7	59.1	55.6	48.3

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Severe Cutback Short Flowpath Mixer With Engine Secondary Flow Simulation; Configuration 10A; Condition 7802

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID 765307 TEST DATE 01/26/77 SCALE RATIO 7.0/1 RUN NUMBER 200?? CONDITION 7802

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	0.0	0.0	KG/S	0.0	0.0
P.R.		1.43	1.45		1.43	1.45	THRUST,ICL	LB			N		
TEMP	(R)	1290.0	617.0	(K)	716.7	342.8	THRUST,MEA	LB		0.0	N		0.0
RHO	LB/FT3	0.034	0.072	KG/M3	0.545	1.153	AREA (MOD)	SQFT			SQM		
VEL	FPS	1230.1	865.2	M/S	374.9	263.7	W (MODEL)	LB/S	2.0	2.4	KG/S	0.9	1.1

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS — RAW CORRECTED SPL - (MODEL)

MICROPHONE ANGLES IN DEGREES

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160	POWER DB-RE
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.125	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.160	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.200	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.315	80.7	81.7	82.2	83.3	86.3	85.2	87.3	91.4	94.9	98.7	102.3	[illegible]
.400	85.9	85.6	86.5	86.9	87.9	88.9	91.1	94.7	98.6	102.3	105.6	[illegible]
.500	87.3	85.6	85.0	87.0	87.7	89.7	91.6	95.1	100.4	104.0	103.7	[illegible]
.630	89.0	87.2	87.5	88.0	89.7	90.7	93.2	96.5	100.7	104.7	105.7	[illegible]
.800	89.1	88.7	87.6	88.6	89.0	90.9	93.3	96.0	100.0	104.3	103.6	[illegible]
1.00	88.2	86.4	86.9	88.7	90.2	91.6	94.4	97.4	100.4	107.4	102.3	[illegible]
1.25	87.8	86.3	87.4	88.5	90.3	91.7	94.5	97.3	99.5	100.3	97.6	[illegible]
1.60	87.5	86.2	87.2	88.5	90.1	92.6	94.5	96.9	98.5	98.4	95.2	[illegible]
2.00	87.1	86.3	87.4	88.0	90.5	92.0	94.4	96.7	97.5	95.9	91.9	[illegible]
2.50	87.3	86.6	87.7	89.1	90.7	92.2	94.5	96.3	96.7	94.3	91.1	[illegible]
3.15	87.6	86.6	87.6	89.2	90.0	92.2	94.3	95.5	95.2	92.6	89.0	[illegible]
4.00	88.2	86.7	87.9	89.1	90.9	92.2	94.0	94.9	94.2	91.2	87.9	[illegible]
5.00	88.7	86.5	87.7	89.1	90.6	91.7	93.3	93.9	92.0	90.0	86.2	[illegible]
6.30	88.3	86.5	87.6	89.0	90.7	91.4	92.0	93.0	91.9	88.8	84.8	[illegible]
8.00	88.9	86.1	87.5	88.9	90.5	91.7	92.3	92.7	90.8	88.1	84.0	[illegible]
10.0	88.5	85.9	87.4	88.7	90.1	90.7	91.8	91.4	89.8	87.2	83.1	[illegible]
12.5	87.5	86.4	88.8	90.7	92.1	91.1	91.4	90.2	88.4	86.1	81.9	[illegible]
16.0	85.9	84.6	85.3	87.9	89.1	89.9	90.3	89.3	87.4	84.9	80.2	[illegible]
20.0	84.5	83.6	85.3	86.6	87.9	88.5	88.6	87.8	85.6	83.6	77.9	[illegible]
25.0	83.6	82.9	84.9	86.2	87.2	87.5	87.0	86.2	84.6	81.4	77.1	[illegible]
31.5	82.1	81.0	83.6	84.9	86.9	86.6	86.5	84.7	82.7	79.7	75.9	[illegible]
40.0	80.1	79.2	81.8	82.8	84.7	85.0	84.0	83.4	80.7	78.1	74.9	[illegible]
50.0	78.2	76.9	79.5	80.3	82.7	82.4	82.5	81.1	78.9	76.6	75.4	[illegible]
63.0	74.7	73.7	76.2	77.5	79.0	79.1	79.4	78.3	75.8	75.2	75.7	[illegible]
80.0	70.7	70.1	72.7	73.3	75.4	75.5	75.9	75.4	73.0	73.6	76.5	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]
OASPL	100.5	99.3	100.4	101.7	103.2	104.2	106.0	107.9	110.0	112.7	1?7.0	

OAPWL = [illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

STAND X206 RIG ID 765307 TEST DATE 01/26/77 SCALE RATIO 7.0/1 RUN NUMBER 200?? CONDITION 7802

		PRIMARY	FAN		PRIMARY	FAN			PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM			MASS FLOW	LB/S	97.0	115.0	KG/S	44.0	52.5
P.R.		1.43	1.45		1.43	1.45	THRUST,ICL	LB			N		
TEMP	(R)	1290.0	617.4	(K)	716.7	342.8	THRUST,MEA	LB		0.0	N		0.0
RHO	LB/FT3	0.034	0.072	KG/M3	0.545	1.153	AREA (MOD)	SQFT			SQM		
VEL	FPS	1230.1	865.2	M/S	374.9	263.7	W (MODEL)	LB/S	2.0	2.4	KG/S	0.9	1.1

FAA DAY — 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	58.2	59.9	60.8	62.0	62.9	63.4	64.0	67.0	69.7	71.3	71.5
63	63.4	63.9	64.9	65.6	66.5	67.1	68.6	71.1	73.4	74.9	74.8
80	64.0	63.9	64.4	65.7	66.3	67.4	[illegible]	71.5	75.2	76.6	72.9
100	67.6	64.3	[illegible]	66.6	68.2	68.8	70.5	72.7	75.3	77.1	74.5
125	[illegible]	[illegible]	65.5	67.2	68.3	69.6	70.6	73.6	75.4	76.7	72.6
160	65.4	66.3	65.3	67.2	68.6	69.7	71.6	73.5	74.9	74.5	70.8
200	65.0	64.2	65.0	67.0	68.7	69.0	71.7	73.4	74.0	72.4	66.3
250	64.6	64.6	65.5	66.4	68.6	69.8	71.6	72.8	72.0	70.3	63.4
315	63.9	63.9	65.4	67.6	68.5	69.6	71.2	72.3	71.4	67.3	59.4
400	64.0	64.1	65.6	67.2	68.6	69.7	71.2	71.0	70.5	65.5	58.2
500	64.6	63.8	65.3	67.1	68.5	69.4	70.7	70.7	68.6	63.4	55.5
630	64.4	63.7	65.4	66.1	68.4	69.2	70.2	69.8	67.3	61.5	53.7
800	64.5	63.1	64.0	66.4	67.7	68.3	69.1	68.4	65.3	59.6	50.9
1000	63.6	62.7	64.3	65.0	67.4	67.6	68.1	66.9	63.7	57.5	48.2
1250	61.7	61.8	63.7	65.3	66.7	66.9	67.1	65.9	61.4	55.9	46.6
1600	60.4	60.0	67.9	64.4	65.4	65.6	65.7	63.7	59.7	53.4	42.8
2000	60.5	60.5	63.5	65.6	66.8	65.2	64.4	61.5	57.1	50.7	39.2
2500	57.7	57.6	60.0	61.8	62.8	62.9	62.1	59.2	54.4	47.3	34.2
3150	54.8	55.3	57.7	59.3	60.3	60.2	58.9	56.0	50.5	42.6	27.6
4000	51.9	52.7	55.6	57.2	57.9	57.3	56.1	52.1	46.7	37.2	21.2
5000	49.6	50.2	53.7	55.3	57.6	55.8	54.0	49.6	43.5	33.0	17.1
6300	45.2	46.2	49.0	51.2	52.0	52.0	49.9	45.4	37.9	27.2	8.4
8000	40.4	41.3	45.1	46.3	48.3	46.8	44.7	39.7	31.7	19.7	0.0
10000	30.1	32.1	36.2	38.0	39.0	37.5	34.0	29.0	18.0	5.2	0.
OASPL	76.5	75.9	77.3	78.8	80.1	80.8	82.1	83.2	84.1	84.1	81.2
PNL	83.9	83.7	90.1	87.0	89.1	88.8	88.9	88.4	87.0	84.4	78.7

400. SIDELINE											
PNL	96.9	96.5	98.0	100.5	101.0	101.7	101.9	100.6	99.0	96.6	91.4
2000. SIDELINE											
PNL	[illegible]	76.6	78.9	80.7	82.0	83.7	82.2	82.0	80.7	78.0	72.0
4000. SIDELINE											
PNL	66.2	66.2	68.1	69.0	71.1	71.7	72.5	72.5	71.3	68.7	62.4
6000. SIDELINE											
PNL	59.8	59.9	61.8	63.5	64.8	65.4	66.3	66.3	65.4	62.0	56.3

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Severe Cutback Short Flowpath Mixer With Engine Secondary Flow Simulation; Configuration 10A; Condition 7803

a.) Model Data Measured At 15 Ft. Radius

STAND X206 RIG ID [illegible] TEST DATE [illegible]/77 SCALE RATIO [illegible] RUN NUMBER [illegible] CONDITION [illegible]

		PRIMARY	FAN		PRIMARY	FAN
AREA	SQFT			SQM		
P.R.		[illegible]	1.51		[illegible]	1.51
TEMP	(R)	[illegible]	[illegible]	(K)	[illegible]	[illegible]
RHO	LB/FT3	[illegible]	[illegible]	KG/M3	[illegible]	[illegible]
VEL	FPS	[illegible]	[illegible]	M/S	[illegible]	[illegible]

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0FT RADIUS

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OASPL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

(Microphone angles in degrees.)

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE — ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
63	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
80	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
100	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
125	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
160	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
200	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
315	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
400	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
630	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
800	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1600	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3150	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6300	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OASPL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PNL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

400. SIDELINE
PNL [illegible]

2000. SIDELINE
PNL [illegible]

4000. SIDELINE
PNL [illegible]

6000. SIDELINE
PNL [illegible]

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Severe Cutback Short Flowpath Mixer With Engine Secondary Flow Simulation; Configuration 10A; Condition 7804

a.) Model Data Measured At 15 Ft. Radius

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Severe Cutback Short Flowpath Mixer With Engine Secondary Flow Simulation; Configuration 10A; Condition 7805

a.) Model Data Measured At 15 Ft. Radius

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Severe Cutback Short Flowpath Mixer With Engine Secondary Flow Simulation; Configuration 10A; Condition 7806

a.) Model Data Measured At 15 Ft. Radius

[illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

[illegible]

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Severe Cutback Short Flowpath Mixer With Engine Secondary Flow Simulation; Configuration 10A; Condition 7807

a.) Model Data Measured At 15 Ft. Radius

[illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

[illegible]

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Severe Cutback Short Flowpath Mixer With Engine Secondary Flow Simulation; Configuration 10A; Condition 7808

a.) Model Data Measured At 15 Ft. Radius

[illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

[illegible]

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Severe Cutback Short Flowpath Mixer With Engine Secondary Flow Simulation; Configuration 10A; Condition 7809

a.) Model Data Measured At 15 Ft. Radius

[illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

[illegible]

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Seve.e Cutback Short Flowpath Mixer With Engine Secondary Flow Simulation; Configuration 10A; Condition 7810

a.) Model Data Measured At 15 Ft. Radius

[illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

[illegible]

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric aosorption present on an FAA day (77°F, 70% RH)

Severe Cutback Short Flowpath Mixer Without Engine Flow Simulation; Configuration 11A; Condition 7905

a.) Model Data Measured At 15 Ft. Radius

[illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

[illegible]

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Severe Cutback Short Flowpath Mixer Without Engine Flow Simulation; Configuration 11A; Condition 7906

a.) Model Data Measured At 15 Ft. Radius

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0 FT RADIUS

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Severe Cutback Short Flowpath Mixer Without Engine Flow Simulation; Configuration 11A; Condition 7907

a.) Model Data Measured At 15 Ft. Radius

[illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

[illegible]

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Severe Cutback Short Flowpath Mixer Without Engine Flow Simulation; Configuration 11A; Condition 7908

a.) Model Data Measured At 15 Ft. Radius

1/3 OCTAVE BAND MODEL JET NOISE DATA 15.0 FT RADIUS

BAND CENTER FREQ (KHZ)	60	70	80	90	100	110	120	130	140	150	160
.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.063	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.080	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.100	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.125	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.160	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.200	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.315	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.400	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.630	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
.800	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1.60	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3.15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6.30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8.00	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
12.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
40.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
50.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
63.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
80.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
100.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LSPL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
63	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
80	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
100	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
125	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
160	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
200	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
315	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
400	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
630	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
800	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1600	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3150	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6300	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
LASPL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PNL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Severe Cutback Short Flowpath Mixer Without Engine Flow Simulation; Configuration 11A; Condition 7909

a.) Model Data Measured At 15 Ft. Radius

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
63	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
80	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
100	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
125	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
160	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
200	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
315	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
400	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
630	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
800	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1600	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3150	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6300	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PNL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

Severe Cutback Short Flowpath Mixer Without Engine Flow Simulation; Configuration 11A; Condition 7910

a.) Model Data Measured At 15 Ft. Radius

[illegible]	[illegible]

b.) Model Data Scaled to Predict JT8D Engine Jet Noise At 1200 Ft. Linear Distance

FAA DAY 1/3 OCTAVE BAND

1200. SIDELINE

ANGLE IN DEGREES

	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0
50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
63	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
80	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
100	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
125	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
160	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
200	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
315	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
400	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
630	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
800	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1250	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1600	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3150	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6300	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OASPL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PNL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

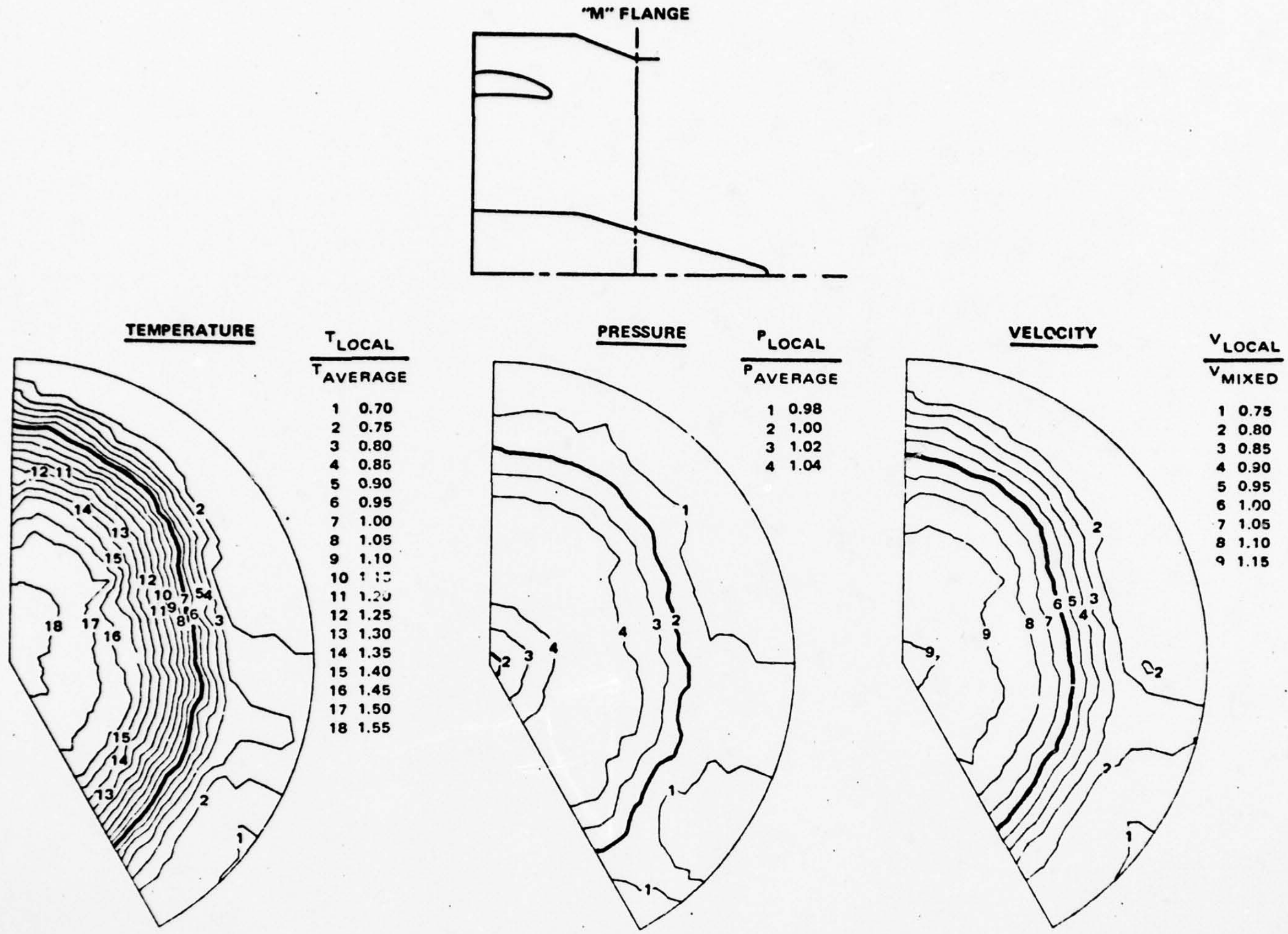
Measured model and scaled data are freefield and have been adjusted to reflect the atmospheric absorption present on an FAA day (77°F, 70% RH)

APPENDIX C

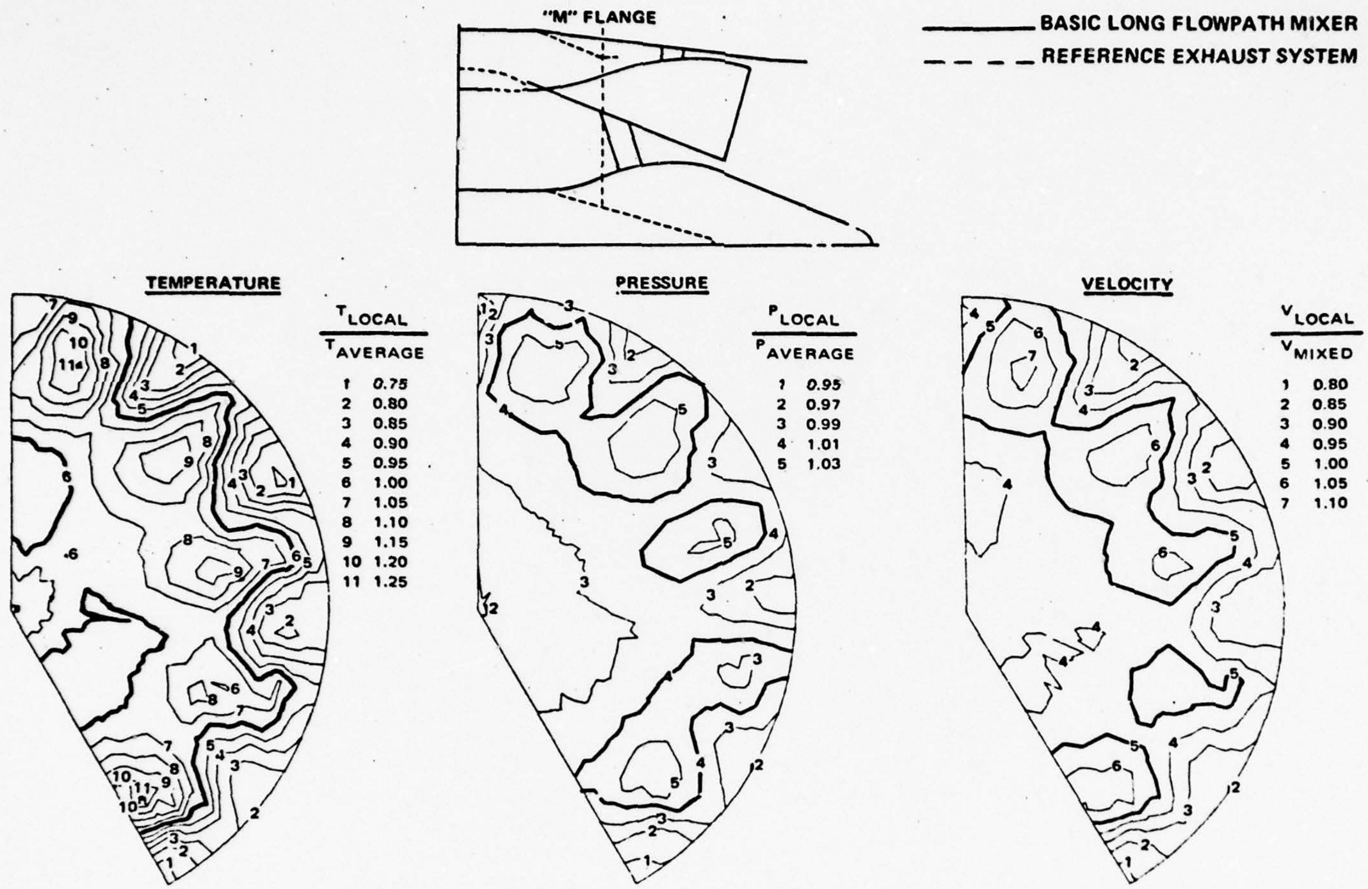
NOZZLE TRAVERSE RESULTS

The figures contained in this section present the results of nozzle traverse testing conducted under the FAA contract as described in Section 3.

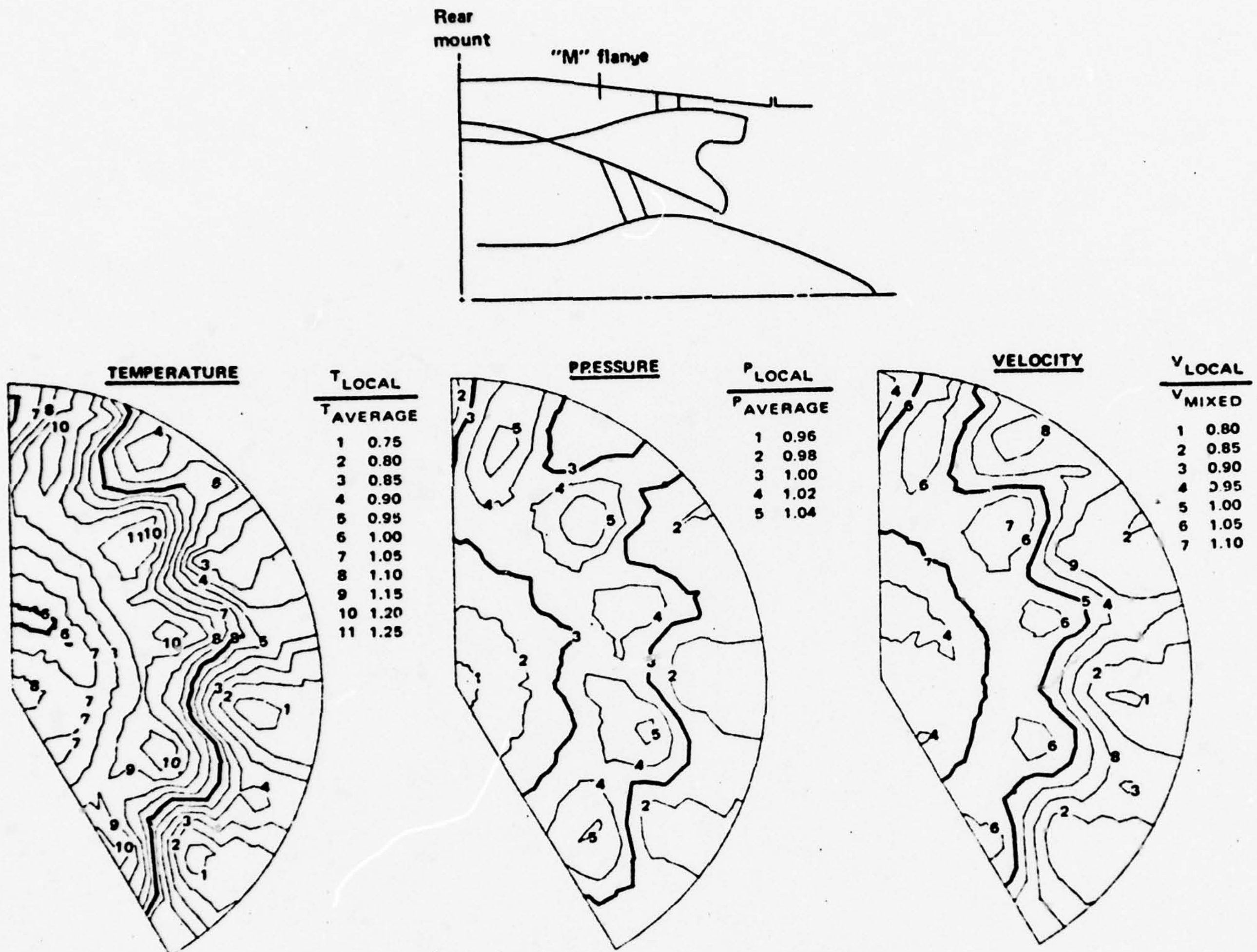
Contour plots of total temperature, total pressure and calculated fully expanded velocity are presented with contour line values normalized to average temperature or pressure and the calculated ideally mixed velocity. Test results are based on testing at takeoff nozzle pressure ratio.



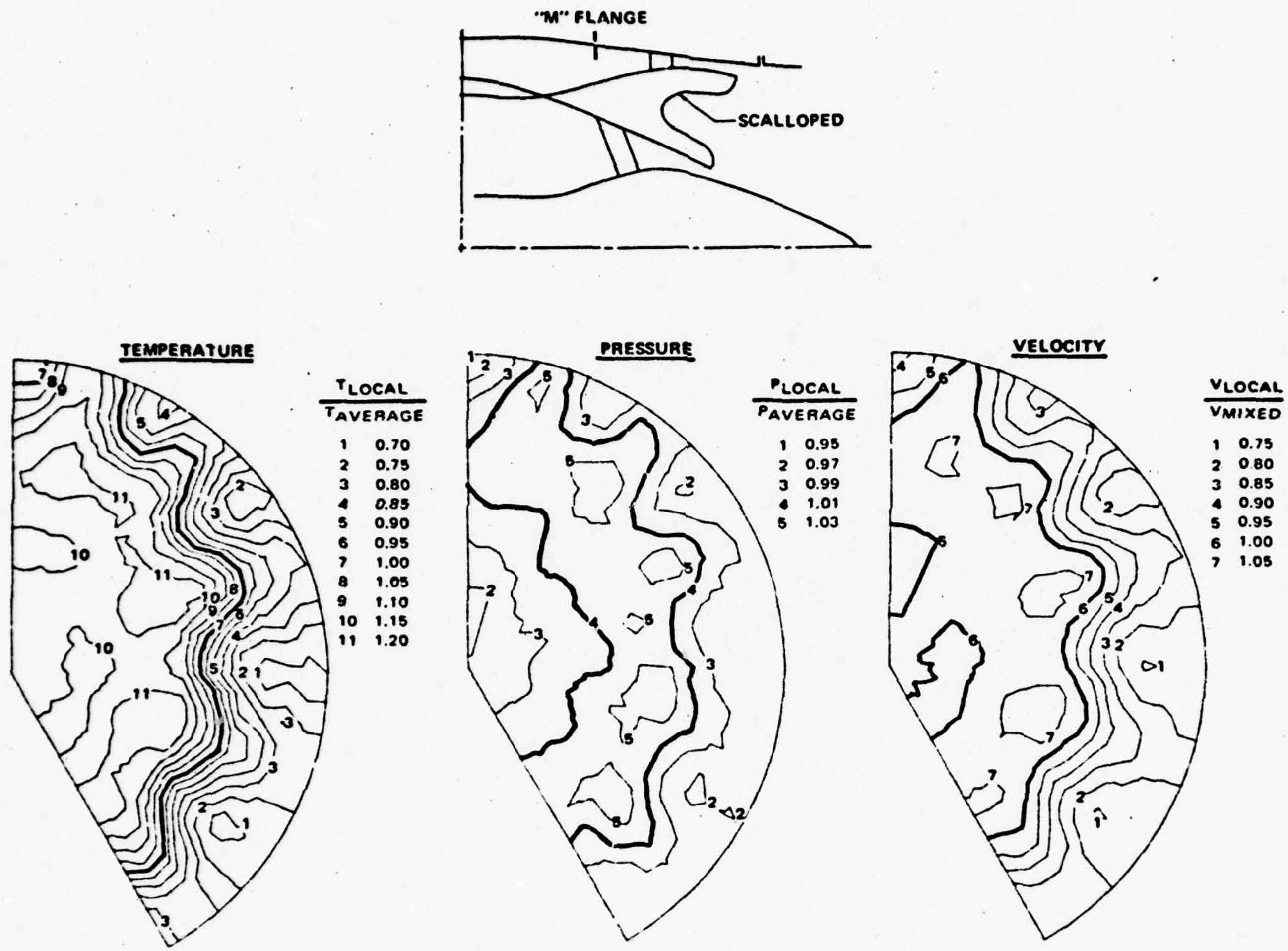
EXHAUST NOZZLE TRAVERSE RESULTS
REFERENCE EXHAUST SYSTEM
CONFIGURATION 2Au



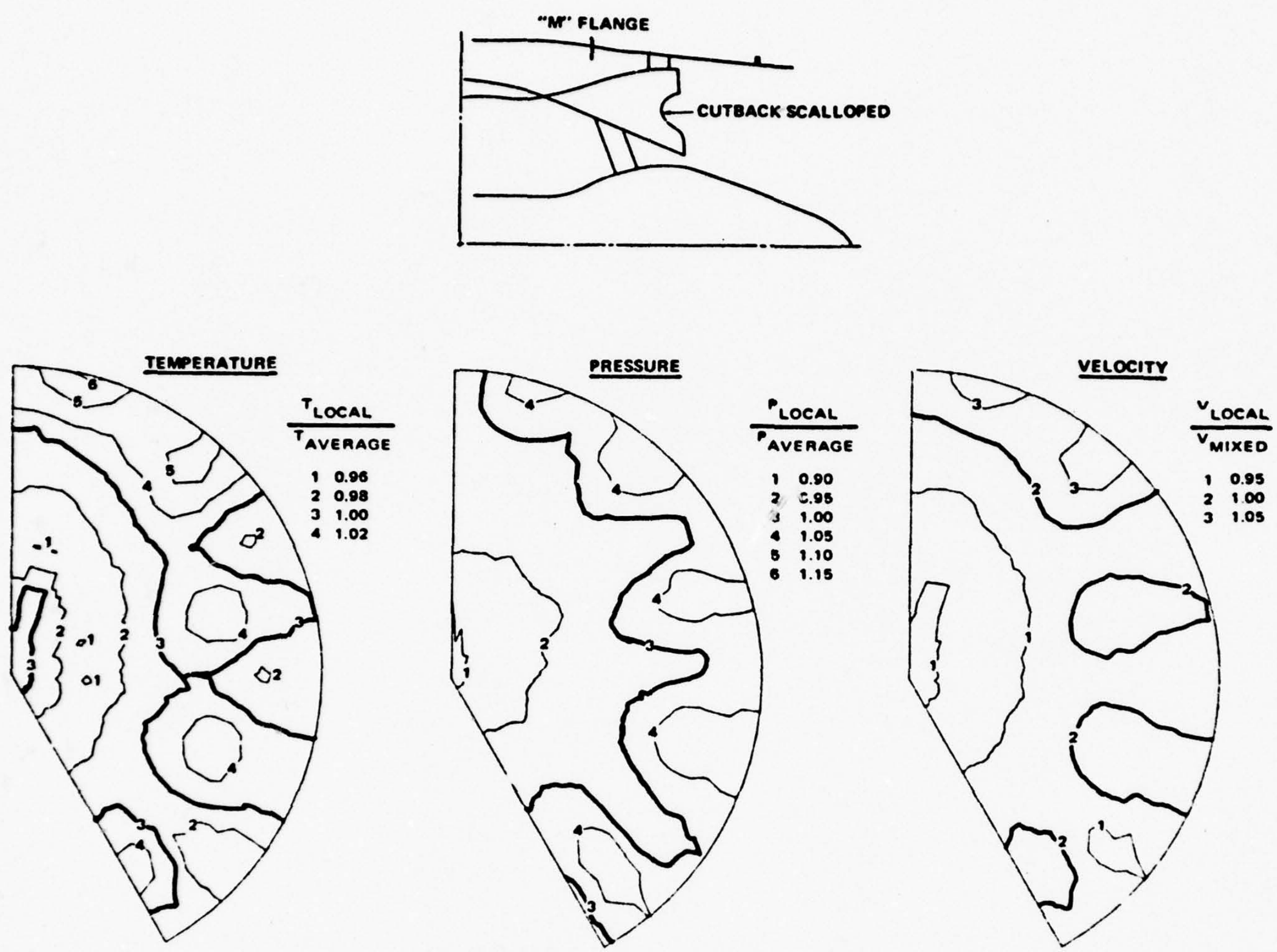
EXHAUST NOZZLE TRAVERSE RESULTS
BASIC LONG FLOWPATH MIXER
CONFIGURATION 1A



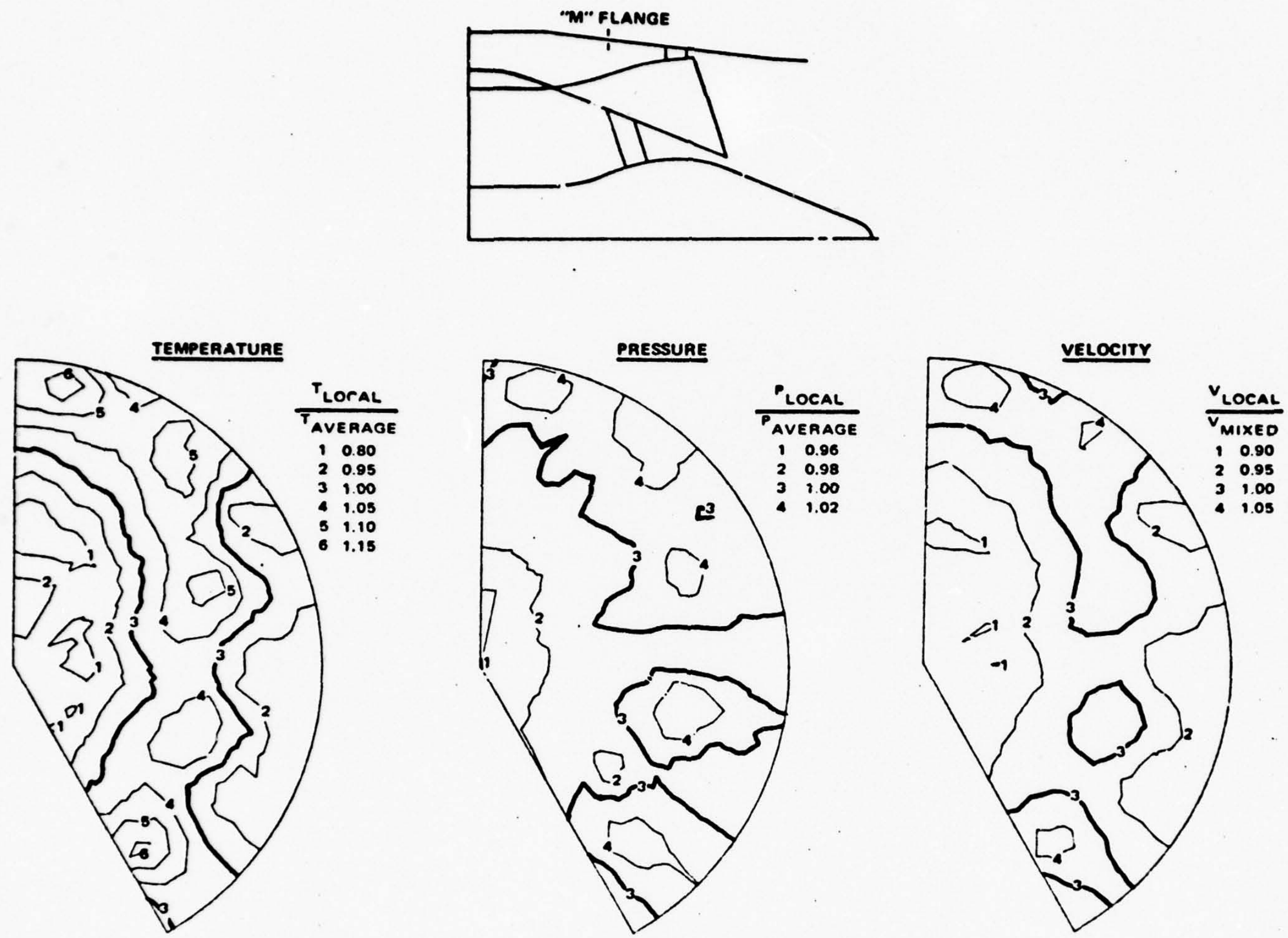
EXHAUST NOZZLE TRAVERSE RESULTS
SHALLOWED SCALLOPED LONG FLOWPATH MIXER
CONFIGURATION 3A



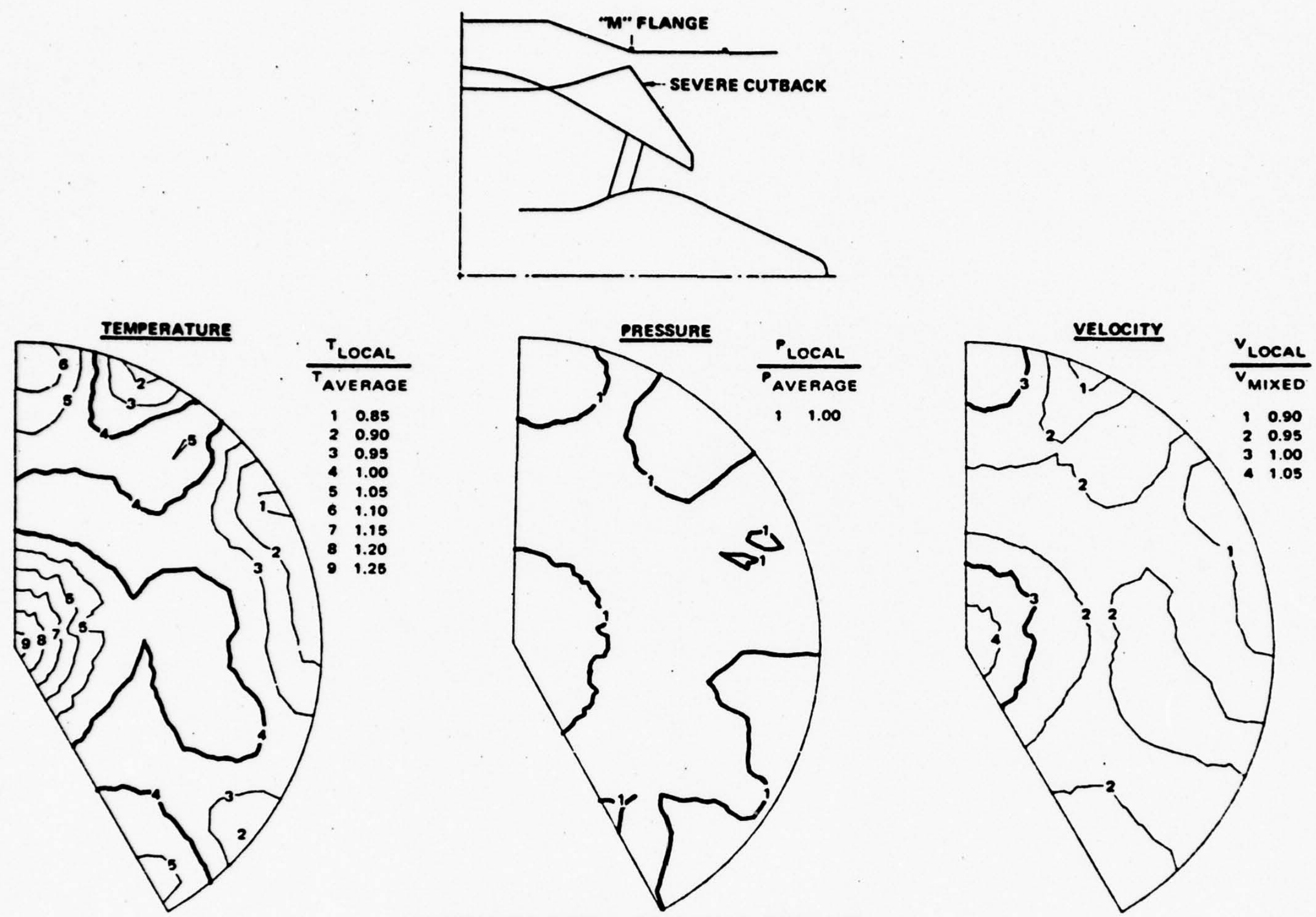
EXHAUST NOZZLE TRAVERSE RESULTS
SCALLOPED LONG FLOWPATH MIXER
CONFIGURATION 4A



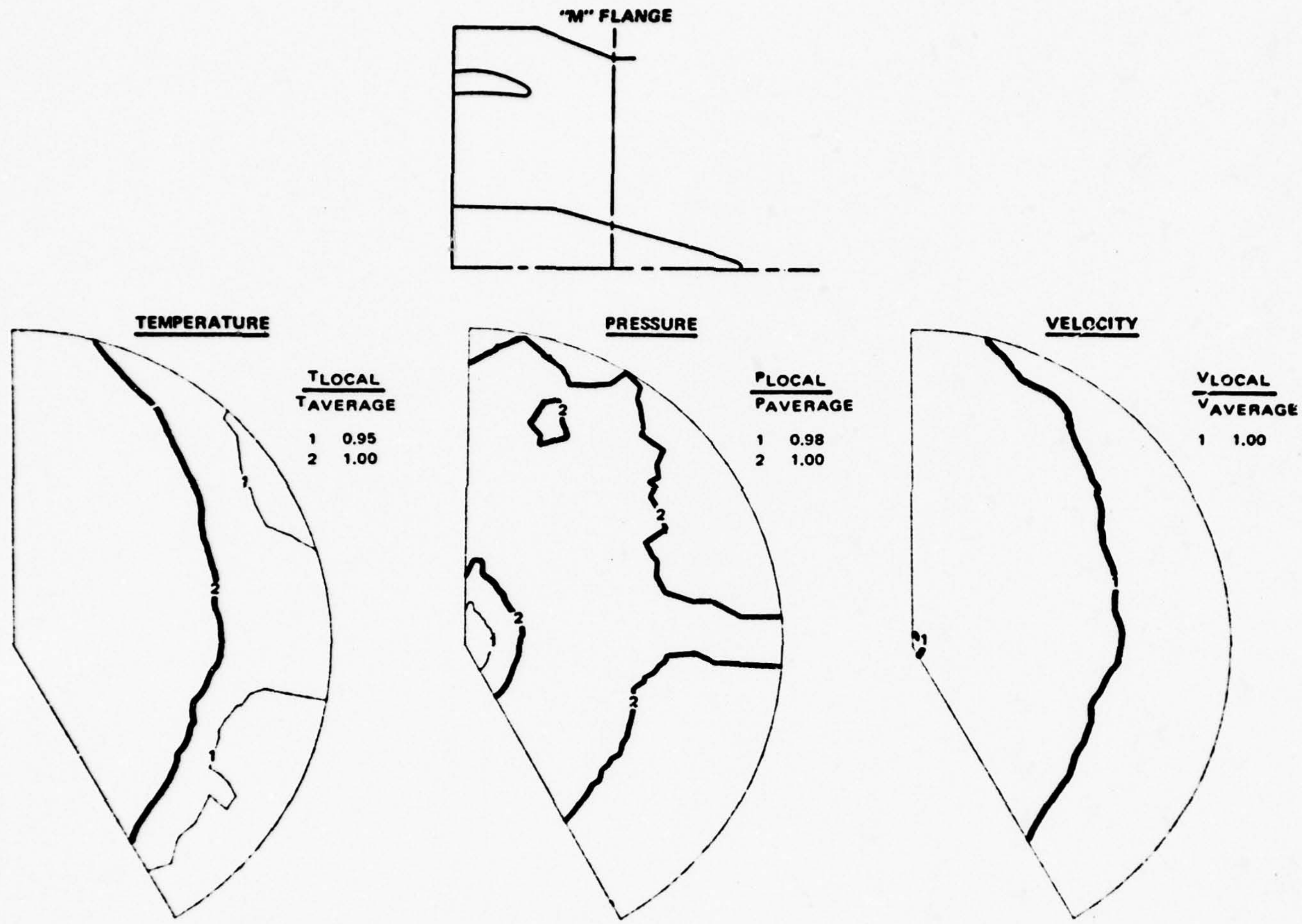
EXHAUST NOZZLE TRAVERSE RESULTS
CUTBACK SCALLOPED LONG FLOWPATH MIXER
CONFIGURATION 5A



EXHAUST NOZZLE TRAVERSE RESULTS
SEVERE CUTBACK LONG FLOWPATH MIXER
CONFIGURATION 6A



EXHAUST NOZZLE TRAVERSE RESULTS
SEVERE CUTBACK SHORT FLOWPATH MIXER WITH SECONDARY FLOW SIMULATION
CONFIGURATION 10A



EXHAUST NOZZLE TRAVERSE RESULTS REFERENCE EXHAUST NOZZLE SYSTEM TESTED AT IDEALLY MIXED CONDITIONS CONFIGURATION 2Am

APPENDIX D

HOT/COLD FLOW MODEL TESTS
TO DETERMINE STATIC PERFORMANCE
OF 1/7-SCALE JT8D MIXER EXHAUST NOZZLES

Prepared by

FLUIDYNE ENGINEERING CORPORATION

SUMMARY

This report presents the results of hot/cold flow, 1/7-scale model tests conducted to determine static performance of two mixer exhaust nozzles for a JT8D engine. The test program was conducted by FluiDyne Engineering Corporation for Pratt & Whitney Division of United Technologies Corporation. The model tests were performed in the Channel 11 static thrust stand at the FluiDyne Medicine Lake Aerodynamic Laboratory.

Three model configurations were tested. Static performance was determined for a free mixer (Reference) and two 12-lobe mixers.

Test conditions included core nozzle pressure ratios from λ_8 = 1.6 to 3.2, and core-to-fan total temperature ratios from 1.0 to 2.41. Fan-to-core total pressure ratios were nominally .88, .93, and 1.00. The test program included 69 performance tests.

Facility checkout tests were made using two standard ASME long-radius metering nozzles. These tests demonstrated facility data accuracy at hot/cold flow conditions similar to the mixer tests.

Test results include static thrust coefficients, nozzle discharge coefficients, and effective throat areas.

TABLE OF CONTENTS

LIST OF FIGURES

DEFINITION OF SYMBOLS

A	Cross-section area, in.^{2}
c	Real-gas A/A* correction factor, dimensionless
C	Balance readout, counts
C_D	Discharge coefficient, dimensionless
C_T	Static thrust coefficient, dimensionless
D	Diameter
F	Steam thrust, lb
g	Acceleration of gravity, 32.174 ft/sec^2
G	Real-fas stream thrust correction factor, dimensionless
H	Thrust component, lb
H_2	Axial balance force, lb
K	Critical weight flow parameter, °R$^{1/2}$/sec
K	Balance force calibration factor, lb/count
L	Calibration load, lb
M	Mach number, dimensionless
m	Mass flow rate, slugs/sec
P	Pressure, static unless otherwise specified by subscript, psia
ΔP	Static pressure difference across seal, psi
r	Radial distance, in
R_N	Reynolds number, dimensionless
T	Temperature, °R
v	Velocity, ft/sec
V	Vertical balance force, lb
W	Weight flow rate, lb/sec
y	Distance from wall
δ	Boundary layer thickness
γ	Ratio of specific heats, dimensionless
Δ	Incremental quantity
λ	Pressure ratio, P_t/P_a, dimensionless
θ	Meridian angle measured clockwise looking upstream, degrees
ρ	Density, slugs/ft^3

Subscripts

a	Ambient
e	Exit
i	Ideal
r	Resultant
t	Total conditions
w	Wall
x	Axial
y	Vertical
∞	Freestream
1,2,4,5,7,8,9	See Figure 6

Superscripts

*	Sonic condition

1.0 INTRODUCTION

The present test program was conducted to provide mixer nozzle performance data for a JT8D turbofan engine. The test model was a 1/7-scale simulation of the exhaust system flowpath, including two mixer nozzles.

The mixer nozzles were furnished by Pratt & Whitney. Additional model components were designed and fabricated by FluiDyne using contours and instrumentation locations specified by P&W. The models were attached to existing model-to-facility adapters. The tests were conducted in FluiDyne's two-temperature-flow static thrust stand (Channel 11). Technical liaison for Pratt and Whitney was performed by Mr. Jerrold Blatt and Mr. Maurice Bridge.

This report describes the test facility, test models, data acquisition and analysis procedures, and presents the test results. Test conditions and major test results are tabulated in Figure 7 and are plotted in Figures 8-10.

2.0 FACILITY DESCRIPTION

The tests were performed in Channel 11 at FluiDyne's Medicine Lake Aerodynamic Laboratory. Channel 11 is a two-temperature-flow static thrust stand used to determine performance of exhaust nozzles in which the two exhaust flows are at different temperatures. Nozzle thrust is determined from force measurement with a strain gage force balance. The general arrangement of Channel 11 is shown in Figure 1. Photographs of test model installations are presented in Figure 5a.

The airflows for both the cold and hot passages of a test nozzle are obtained from the facility high-pressure dry air storage system. Air for the cold passage is throttled, metered through a long-radius ASME nozzle, ducted to the cold passage of the test nozzle, and finally exhausted to atmosphere. Air for the hot passage is throttled, passed through a regenerative storage heater, mixed with unheated bypass flow to achieve a desired temperature, metered through a long-radius ASME nozzle, ducted to the hot passage of the test nozzle, and finally exhausted to atmosphere.

The air heater used for the hot flow contains alumina pebbles which are preheated to approximately 1250°F with a combustion heater. The heater capacity is nominally 40 lbs/sec at 1200°F.

The model assembly is supported by a strain gage force balance and is isolated from the facility piping by two elastic seals; see schematic in Figure 6. Calibration of the balance and seals is described in Section 4.7.

The ASME meter at Station 1 is water-cooled to protect the elastic seal from thermal effects. Since the cooling water is confined to the upstream (i.e., non-metric) hardware only, no tare forces are introduced by the water supply lines.

Facility instrumentation is provided to calculate mass flow rates at Stations 1 and 4, and to calculate the exit thrust produced by the test nozzle; details are described in Section 4.0. The data were recorded with Polaroid cameras and digital printers.

3.0 MODEL DESCRIPTION

The present tests used existing model adapters from the test programs reported in References 5, 6, 7, and 8, model components provided by P & W, and model components fabricated by FluiDyne for the present tests. Assembly drawings of the models are shown in Figure 2. Photographs of test hardware are shown in Figure 5.

3.1 Model Adapters

The test models attached to common adapting hardware which supplied separately-metered flows to the fan and core nozzles. The fan air flow was nominally at ambient temperature for all tests. The core air flow was nominally at ambient temperature for the "cold" tests, but was heated to approximately 600-800°F for the "hot" tests.

The main support member for the adapters (Spider, 0937-902) had been rebuilt for the Reference 7 tests. Adapters for the core passage consisted of an insulated duct, a jet breaker, a choke plate, two screens, and a common core shroud adapter which supported a common splitter/mixer adapter. Charging station instrumentation in the core passage included three 10-tube area-weighted total pressure ($^{P}t_8$) rakes, five area-weighted total temperature ($^{T}t_8$) probes, one thermocouple for controlling the flow temperature, three static pressure taps on the inner wall, and four static pressure taps on the outer wall.

The adapters for the annular fan passage included a choke plate, two screens, a common bellmouth contraction, and a common fan cowl adapter. Charging station instrumentation in the fan passage included four 12-tube, area-weighted, $^{P}t_7$ rakes; one 4-probe $^{T}t_7$ thermocouple rake, one thermocouple for control purposes; and four static taps on the inner and outer walls.

The single control thermocouples at the two charging stations were used to set the desired temperature ratio, T_{t_8}/T_{t_7}. Outputs from these thermocouples were amplified, divided, and displayed on a digital panel meter to provide the facility valve operators with a visual indication of the actual temperature ratio.

3.2 Nozzle Components

Nozzle components included a reference splitter (free mixer), two 12-lobed mixers, three plugs, two fan duct cases, and one tailpipe.

The mixers were of the same basic design; one had deep scallops (Configuration 4A) and another had scallops and shortened mixing lobes (Configuration 5A).

Three test configurations were assembled, as summarized in Figure 3. Photographs of the test hardware, including partial assemblies, are shown in Figures 5a-d.

The only static pressure taps on the nozzle components were added for the thrust reverser tests; details are shown in the drawings (Figure 4).

3.3 Standard ASME Nozzles

Facility demonstration and checkout tests were performed using two standard ASME long-radius flow metering nozzles (Figures 2a and 5a). The upper nozzle (cold flow) simulated the fan passage of the mixer nozzle, while the lower nozzle (hot flow) simulated the core passage. The two ASME nozzles were tested separately and simultaneously (only simultaneous test results are presented in this report).

4.0 DATA ANALYSIS PROCEDURES

The following subsections describe the data analysis procedures used in the present test program. Station notations are defined in Figure 6 Computer programs written in BASIC language are included in the Appendix.

4.1 P_{t_7} and P_{t_8} Definitions

P_{t_7} was defined as the area-weighted average of four 12-probe rakes. The area-weighting method was adequate for the present tests since only non-distorted pressure profiles were involved.

For all configurations except the reference model (Configuration 2A), P_{t_8} was defined as the area-weighted average of three 10-probe rakes. For the reference model tests, P_{t_8} was defined as 1.0075 times the mass-flow-derived P_{t_8}. This correlation was used because of disagreement between the three P_{t_8} rakes. The correlation was obtained by comparing the mass-flow-derived P_{t_8} to the area-weighted P_{t_8} on the configuration 2A tests. After the configuration 2A tests were completed, a second screen was added to the core passage upstream of the core charging station, resulting in good agreement between the three P_{t_8} rakes; the correlation was not used for subsequent tests.

The above paragraphs define P_{t_7} and P_{t_8} at the charging station rakes. These total pressures were then adjusted to a hypothetical charging station located 1.2 inches further downstream. The calculation procedure, specified by P&W, is detailed in the Appendix. The P_t corrections were on the order of 0.1%.

4.2 Flow Rates

The mass flow rates through the test nozzles were determined using choked ASME long-radius metering nozzles. The core nozzle flow rate was calculated at Station 1, (see Figure 6) and the fan nozzle flow rate was calculated at Station 4, using the following equations.

$$W_1 = W_8 = \frac{K_1 C_{D_1} A_1 P_{t_1}}{\sqrt{T_{t_1}}}$$

$$W_4 = W_7 = \frac{K_4 C_{D_4} A_4 P_{t_4}}{\sqrt{T_{t_4}}}$$

The critical flow factor, K, was calculated as a function of total pressure and total temperature.

$$K=0.52820 + aT_t + bT_t^2 + cT_t^3 + 0.186 \times 10^{-4} \times P_t \times e^{-.0067(T_t-5000)}$$

where: $a = 0.1654 \times 10^{-4}$

$b = -0.2119 \times 10^{-7}$

$c = 0.6008 \times 10^{-11}$

T_t is in °R and P_t is in psia.

This equation was obtained by curve-fitting tabulated values in Reference 1; the curve-fit is accurate to within $\pm$ 0.03% for $0 < P_t < 30$ atmospheres and $460 < T_t < 700°R$, and is accurate to within $\pm$ 0.1% for $0 < P_t < 40$ atmospheres and $460 < T_t < 1800°R$.

C_{D_4} was calculated using a semi-empirical equation

$$C_{D_4} = 1 - 0.184\ R_{N_4}^{-0.2}$$

and varied from 0.991 to 0.993 for the present tests.

C_{D_1} was calculated from a similar equation, modified to account for a thermal boundary layer. This thermal boundary layer results from water-cooling of the Station 1 meter.

$$C_{D_1} = 1 - (0.184\ R_{N_1}^{-0.2})\ (1.574 - 0.574\ T_{t_1}/T_w)$$

The above equation was derived assuming constant static pressure in the boundary layer, a 1/7 power velocity profile, thermal boundary layer thickness equal to velocity boundary layer thickness, and a density distribution in the boundary layer defined by

$$\frac{\rho}{\rho_\infty} = \frac{T_\infty}{T_w} - \left(\frac{T_\infty}{T_w} - 1\right) \left(\frac{y}{\delta}\right)^{1/7}$$

T_w, the wall temperature at the nozzle throat, was estimated from heat-balance calculations of heat transfer from the air stream to the cooling water. T_w values calculated for the present tests varied from 105° to 165°F. R_{N_1} was calculated using a mean temperature $(T_w + T_{t_1})/2$. C_{D_1}, calculated using the above equation, varied from 0.991 to 0.997 for the present tests. Given sufficient wall-cooling, C_{D_1} may exceed unity (Reference 2).

The above equation for C_{D_1} is believed to be correct within $\pm$ 0.002, on the basis of results from facility demonstration

tests. These demonstration tests included test series with either a 2.5-inch or a 4-inch diameter ASME nozzle located downstream of the water-cooled Station 1 meter. The downstream nozzle was essentially at adiabatic conditions (thin-wall construction, backside insulated). Flow rates calculated at Station 1 (using the above C_{D_1} equation) agreed within ± 0.25% with flow rates calculated at the downstream nozzle (using adiabatic wall C_D), thereby indicating the adequacy of the C_{D_1} equation.

A_4, the geometric throat area of the Station 4 meter, was 2.5475 in^2. A_1, the geometric throat area of the Station 1 meter, was calculated assuming thermal expansion from 70°F to T_w. The largest value of A_1 calculated for the present tests was 1.3490 in^2, representing a thermal expansion (area change) of 0.16% from the nominal area of 1.3468 in^2.

P_{t_1} and P_{t_4} were measured on Heise bourdon-tube gages. T_{t_1} and T_{t_4} were measured with shiedled chromel/alumel thermocouples and recorded on the facility Vidar system (analog to digital converter, printer).

Calculated flow rates (lbm/sec) for the present tests were in the ranges

$$2.6 < W_1 < 10.2 \qquad\qquad 2.2 < W_4 < 9.1$$

4.3 Discharge Coefficients and Effective Throat Areas

Discharge coefficient is defined as the ratio of actual flow rate through a nozzle to the ideal isentropic flow rate at the overall nozzle pressure ratio. Overall nozzle pressure ratios are defined as $\lambda_7 = P_{t_7}/P_a$ and $\lambda_8 = P_{t_8}/P_a$.

$$C_{D_7} = \frac{W_4 \sqrt{T_{t_7}}}{K_7 A_7 P_{t_7} (A^*/A)_7} \quad \text{and} \quad C_{D_8} = \frac{W_1 \sqrt{T_{t_8}}}{K_8 A_8 P_{t_8} (A^*/A)_8}$$

K_7 and K_8 were evaluated using a previous equation, as functions of P_{t_7}, T_{t_7} and P_{t_8}, T_{t_8}.

The throat area of the 3.75-inch ASME nozzle was A_7 = 11.0447 in^2. The throat area of the 4.00-inch ASME nozzle, when measured at room temperature, was A_8 = 12.5664 in^2. The actual throat area of the 4.00-inch nozzle, when tested with hot flow, was calculated assuming thermal expansion from 70°F to a recovery temperature, T_w. T_w was calculated assuming isentropic expansion and a recovery factor of 0.89, i.e.,

$$T_w/T_{t_8} = (T_8/T_{t_8}) + 0.89\ (1 - T_8/T_{t_8})$$

A_8 values calculated for the ASME tests ranged from 12.710 to 12.714 in^2. For the mixer nozzle tests, reference areas A_7 and A_8 were not defined, and therefore, fan and core nozzle discharge coefficients could not be calculated. However, the effective throat areas ($C_{D_7}A_7$ + $C_{D_8}A_8$) were calculated. In addition, an overall nozzle discharge coefficient was calculated as $C_{D_9} = (C_{D_7}A_7 + C_{D_8}A_8)/A_9$ where A_9 is the exit area of the tailpipe (see Figure 6a) and equals 14.21 in^2.

P_{t_7} and P_{t_8} were measured on multiple-tube mercury manometers, and were defined as described in Section 4.1.

T_{t_7} and T_{t_8} were measured with shielded chromel/alumel thermocouples. However, since the thermocouple rakes were further upstream than the pressure rakes, the measured temperatures were adjusted to account for heat transfer (between the air and the model walls) occurring between the temperature and pressure rake stations. This adjustment was based on analytic estimates which indicated that T_{t_8} should decrease 5.7° when the core and fan temperatures differed by 760°F. An energy balance required that the fan flow temperature would increase by approximately the same amount. The temperature

adjustments calculated for the present tests ranged up to -6° for T_{t_8} and +6° for T_{t_7}.

A*/A, the isentropic area ratio, is used to correct the ideal flow rate when the nozzle is unchoked. A*/A for the fan nozzle was calculated using equations valid for γ = 1.4, obtained from Reference 3.

$$A^*/A = 3.86393\lambda^{-0.71429} \sqrt{1 - \lambda^{-0.28571}} \quad \text{for } \lambda \leq 1.8929$$

and

$$A^*/A = 1 \quad \text{for } \lambda \geq 1.8929$$

A*/A for the core nozzle was obtained by correcting the γ = 1.4 value for "real gas effects," to account for γ_8 being significantly less than 1.4. The correction was derived by curve-fitting tabulated values from Reference 4; no corrections were indicated for T_t < 900°R. First, the critical pressure ratio was expressed as a function of total temperature:

$$1/\lambda^* = 9.667 \times 10^{-6} \times T_t\ (°R) + 0.5196$$

If $\lambda \geq \lambda^*$, then A*/A = 1. If $\lambda < \lambda^*$ and $900 < T_t < 1260°R$,

$$c = 1 + \left(\frac{1}{\lambda} - \frac{1}{\lambda^*}\right) 5.728 \times 10^{-5} (T_t - 900)$$

If $\lambda < \lambda^*$ and $1260 < T_t < 1800°R$,

$$c = 1 + \left(\frac{1}{\lambda} - \frac{1}{\lambda^*}\right) [2.615 \times 10^{-5} (T_t - 1260) + 0.020621]$$

Finally,

$$A^*/A = c \times (A^*/A)_{\gamma = 1.4}$$

For the present tests, c (denoted c* on computer output sheets) varied from 1.000 to 1.002.

4.4 Thrust Measurement

The net static axial thrust of an exhaust nozzle is defined as the axial exit momentum of the exhaust flow, plus the excess of exit pressure over ambient pressure times the exit area.

$$H_x = mv_{e_x} + (P_e - P_a) A_{e_x}.$$

The net static thrust of an exhaust nozzle model was determined in the present test program by applying the momentum equation to the control volume shown in Figure 6. The analysis of axial forces applied to the control volume includes entering stream thrusts (F_1 and F_4), a balance force (H_2), various pressure-area terms and the axial exit stream thrust, ($H_x + p_a A_{e_x}$). The axial balance force, H_2, as used here, included seal tare forces. Summing axial forces,

$$H_x = F_1 + F_4 + p_2 (A_2 - A_1) + p_5 (A_5 - A_4) - p_a (A_2 + A_5) - H_2$$

The stream thrust at Station 4 is the exit stream thrust of a choked long-radius ASME nozzle, and was calculated as:

$$F_4 = G_4 (1 + 1.4\ C_{D_4} C_{T_4})\ .52828\ P_{t_4} A_4$$

Use of $\gamma = 1.4$ and $P^*/P_t = .52828$ in the above equation imply an ideal gas. The factor G, derived from tabulated values in References 1 and 4, corrects the stream thrust from that of an ideal gas to that of a real gas.

If $T_t < 560°R$, $G = 1.00012 + 6.8338 \times 10^{-6} \times P_t$ (psia)

If $T_t > 560°R$, $G = 1.0044 - (4.196 - .0059\ P_t)(T_t + 460) \times 10^{-6}$

C_{D_4} has already been discussed; C_{T_4} was calculated in an analogous manner,

$$C_{T_4} = 1 - 0.109\ R_{N_4}^{-0.2}$$

This equation is a semi-empirical expression of the thrust coefficient of an ASME nozzle at a pressure ratio of λ = 1.8929 (corresponding to P^*/P_t = .52828). For the present tests, G_4 varied from 1.000 to 1.0013, and C_{T_4} varied from 0.995 to 0.997.

The stream thrust at Station 1 was calculated as:

$$F_1 = G_1\ (1 + 1.4\ C_{D_1} C_{T_1})\ .52828\ P_{t_1} A_1$$

Each variable in this equation has been previously described, except C_{T_1}. C_{T_1} was calculated in a similar manner as C_{T_4}, but was modified to account for the thermal boundary layer described in the discussion of C_{D_1} in Section 4.1:

$$C_{T_1} = 1 - (0.109\ R_{N_1}^{-0.2})\ (0.828 + 0.172\ T_{t_1} T_w)$$

The above equation was derived using the same assumptions as in the derivation of C_{D_1}. C_{T_1} for the present tests varied from 0.992 to 0.996.

Static pressures p_2 and p_5 were measured on mercury manometer. Ambient pressure (p_a) was measured on a Haas mercury manometer (barometer). A_5 and A_2, the geometric reference areas for the seals, were both 3.5 in^2.

The vertical thrust, H_y, was calculated from the two vertical balance forces:

$$H_y = V_1 + V_3$$

The resultant thrust, H_r was calculated as the vector sum of the axial thrust H_x, and vertical thrust H_y. Resultant thrust vector angle, α, was determined as:

$$\alpha = \tan^{-1} \frac{H_y}{H_x}$$

The sign convention for positive values of thrust components and vector angle is defined in Figure 6a. Note that for the present tests, the nozzle is mounted horizontally and there is no vertical thrust.

4.5 Thrust Coefficient

The static thrust coefficient of an exhaust nozzle is defined as the ratio of the measured nozzle net thrust to the ideal thrust of the actual mass flow when expanded isentropically from P_t to P_a.

$$C_T = \frac{H}{m\, v_i}$$

For the dual-flow tests, the ideal thrust was calculated as the sum of the fan nozzle ideal thrust and the core nozzle ideal thrust:

$$C_T = \frac{H}{m_7 v_{i_7} + m_8 v_{i_8}}$$

For the present tests, thrust coefficients were calculated for the axial and vertical thrust components and for the resultant vector.

$$C_{T_x} = \frac{H_x}{m_7 v_i + m_8 v_{i_8}}$$

$$C_{T_y} = \frac{H_y}{m_7 v_{i_7} + m_8 v_{i_8}}$$

$$C_{T_r} = \sqrt{C_{T_x}^{\,2} + C_{T_y}^{\,2}}$$

Ideal thrust was calculated using a dimensionless ideal thrust function, $m_i v_i / P_t A^*$, which is a function of both λ and γ.

$$m_i v_{i_7} = (A^*/A)_7 \, C_{D_7} A_7 P_{t_7} \, (m_i v_i / P_t A^*)_7$$

$$m_i v_{i_8} = (A^*/A)_8 \, C_{D_8} A_8 P_{t_8} \, (m_i v_i ; P_t A^*)_8$$

where

$$(m_i v_i / P_t A^*) = \gamma \left[\frac{2}{\gamma + 1}\right]^{\frac{\gamma}{\gamma - 1}} \sqrt{\frac{\gamma + 1}{\gamma - 1}} \sqrt{1 - \gamma^{\frac{1 - \gamma}{\gamma}}}$$

$$= 1.81162 \sqrt{1 - \lambda^{-0.28571}}, \text{ for } \gamma = 1.4.$$

For the present tests, γ_7 was taken to be 1.400. However, $\gamma_8 \neq$ 1.4 and, therefore, $(m_i v_i / P_t A^*)_8$ obtained from the above equation was corrected to account for "real gas effects" by multiplying by the ratio

$$\frac{(m_i v_i / P_t A^*) \text{ for real gas}}{(m_i v_i / P_t A^*) \text{ for } \gamma = 1.4}$$

This ratio was calculated from tabulated values in Reference 4; for the present range of test conditions this factor was obtained from a curve-fit expression

$$.9957 - 5.81 \times 10^{-5} \times (^{T}t_8, \, °R - 1000) + 1.25 \times 10^{-3} \times (\lambda_8 - 1)$$

and varied between .9950 and .9972.

4.6 Pressure and Temperature Data

Pressure instrumentation for facility pressures and charging station pressures were described previously. All other pressures in the model were measured using multiple-tube mercury manometers. Model pressure data were reduced to absolute pressures (psia) and dimensionless ratios (P/P_{t_7}, P/P_{t_8}, P/P_a). The results are tabulated on computer output sheets, contained in the Appendix.

Facility and charging station temperature data were obtained using shielded chromel/alumel thermocouples, and were recorded on the facility Vidar system. Temperatures were expressed in °F or °R, or both.

4.7 Force Balance Calibration

The force balance calibration determines the output characteristics of both the force balance flexures and the elastic seals which provide pressure-tight expansion joints between the metric model assembly and the non-metric facility structure. The outputs of the strain-gage flexures are very linear with applied load, but the seals provide an additional axial force which is a function of both axial load and seal pressure. Most of this force carryover results from radial seal deflections required to support the static pressure differentials across the seals when the ducts are pressurized. Consequently, the seal and balance assembly is calibrated under simulated operating conditions of loads and seal differential pressures. The calibration for this mixed flow facility is further complicated by the fact that the location of the applied load during a test is a function of the hot/cold flow split and nozzle pressure ratios; the calibration must, therefore, duplicate both the magnitude and location of the net force which was experienced during a test. As a result of these requirements, it has been found expedient to calibrate "on-point," that is, to determine the balance

output characteristics while simultaneously reproducing the forces, force location, and seal pressures experienced at a specific test point.

The forces and force location for each test point are not known exactly until the on-point calibration is completed. The initial test data are, therefore, reduced (by computer) using a preliminary calibration. The computer is programmed so that, as it reduces the initial test data, it also prints out the required calibration information (calibration load and load location), such that an accurate on-point calibration can then be made.

The on-point calibration is made with the seals pressurized to the pressures measured during the test, and the loads applied at the locations obtained from the preliminary data. The loads are then varied slightly to obtain approximately the balance output measured during the test. The on-point calibration factors are then calculated as:

$$K_2 = \left[(L_x + \Delta P_2 A_2 + \Delta P_5 A_5)/C_2\right]$$

$$K_1 = V_1/C_1$$

$$K_3 = V_3/C_3$$

The final balance forces for reducing test data were then calculated as

$$H_2 = K_2 C_2, \quad V_1 = K_1 C_1, \quad V_3 = K_3 C_3,$$

using the actual balance outputs measured during the test.

5.0 PRESENTATION OF RESULTS

Test conditions and major test results are tabulated in Figure 7 and are plotted in Figures 8 through 10. Detailed data and calculations are contained in a separate Data Appendix.

The tabulation in Figure 7 includes: configuration, run number, actual values of the independent test variables ($\lambda_7, \lambda_8, {}^{T}t_8/{}^{T}t_7$), the pressure ratio split (λ_7/λ_8), and the major test results (C_T, ${}^{C}D_7A_7$, ${}^{C}D_8A_8$, ${}^{C}D_9$, W_7/W_8). For the ASME nozzle tests, ${}^{C}D_7$ and ${}^{C}D_8$ are tabulated in place of effective throat areas.

5.1 ASME Checkout Tests

Standard ASME nozzles (Figures 2a and 5a) were tested to demonstrate facility data accuracy in determining C_D and C_T of test nozzles. Results of these tests are tabulated in Figure 7 (sheet 1) and are plotted in Figure 8.

Target performance curves for the ASME nozzles are shown in the figures. These predictions are based on semi-empirical equations, and were obtained by analysis of ASME nozzle exit surveys conducted by FluiDyne.

The test results were statistically analyzed in terms of bias (average difference between actual and predicted values) and scatter (standard deviation of the individual differences from their average). This analysis is summarized in the following table:

	Bias:			Standard Deviation:		
Runs	${}^{C}D_7$	${}^{C}D_8$	C_T	${}^{C}D_7$	${}^{C}D_8$	C_T
1 - 5	.0002	-.0010	-.0006	.0009	.0012	.0006
6 - 10	.0003	-.0008	.0004	.0014	.0018	.0017

5.2 Mixer Nozzle Tests

Major results from the mixer nozzle performance tests are tabulated in Figure 7, Sheets 2 and 3. Thrust Coefficients are plotted versus core nozzle pressure ratio in Figures 9a - 9c. Justification of high C_T values ($C_T > 1.00$) for mixer nozzles was discussed in Reference 5; similar reasoning applies for the present test results.

Overall nozzle discharge coefficients, C_{D_9}, are plotted in Figures 10a - 10c. The abscissa is the mass-flow-weighted pressure ratio, $\lambda = (W_7\lambda_7 + W_8\lambda_8)/(W_7 + W_8)$. The ordering of the figures is the same as for the thrust coefficients in Figure 9.

In addition to the specified test program, Configuration 2A was tested at three other times (twice near middle and near the end of program). These additional tests demonstrated facility data repeatability.

REFERENCES

1. Johnson, R. C., "Real-Gas Effects in Critical-Flow-Through Nozzles and Tabulated Thermodynamic Properties." NASA TN D-2565. 1965.

2. Massier, P. F., Back, L. H., Noel, M. B., and Saheli, F., "Viscous Effects on the Flow Coefficient for a Supersonic Nozzle." AIAA Journal, Volume 8, No. 3, March 1970, pp. 605-607.

3. Ames Research Staff, "Equations, Tables and Charts for Compressible Flow." NACA Report 1135. 1953.

4. Jordan, D. P., and Mintz, M. D., "Air Tables." McGraw-Hill Book Company, New York. 1965.

5. Kovacevic, N., and Brasket, R. G., "Hot/Cold Flow Model Tests to Determine Static Performance of 0, 12, and 18-Lobe Mixer Exhaust Nozzles." FluiDyne Report 0937, Pratt & Whitney Agreement of 18 August 1972. January 1973.

6. Kovacevic, N., Kirschbaum, R. A., and Brasket, R. G., "Hot/Cold Flow Model Tests to Determine Static Performance of Several 18-Lobe Mixer Exhaust Nozzles (Engines A, B, C)." FluiDyne Report 0967, Pratt & Whitney Agreement of 10 May 1973. November 1973.

7. Kirschbaum, R. A., and Brasket, R. G., "Hot/Cold Flow Model Tests to Determine Static Performance of 1/7-Scale Mixer Exhaust Nozzles for a JT8D Refan Engine." FluiDyne Report 1034, Pratt & Whitney Agreement of 5 December 1974. March 1975.

8. Kirschbaum, R. A., and Brasket, R. G., "Hot/Cold Flow Model TEsts to Determine Static Performance and Jet-Wing Surface Temperatures for 1/7-Scale JT8D-217 Mixer Exhaust Nozzles." FluiDyne Report 1067, Pratt & Whitney Agreement of 30 December 1975. March 1976.

FluiDyne ENGINEERING CORPORATION

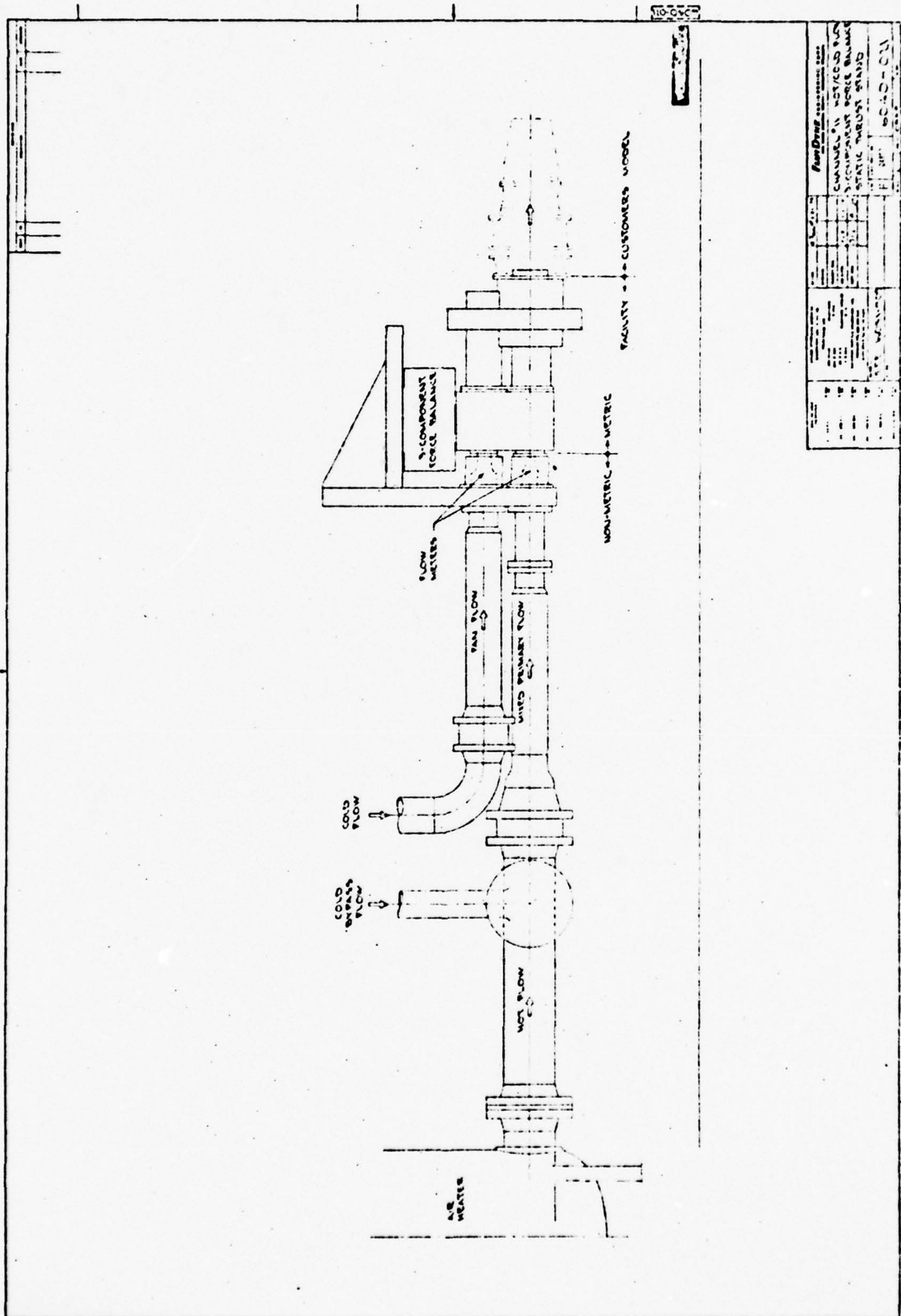


FIGURE 1. CHANNEL 11 FACILITY LAYOUT

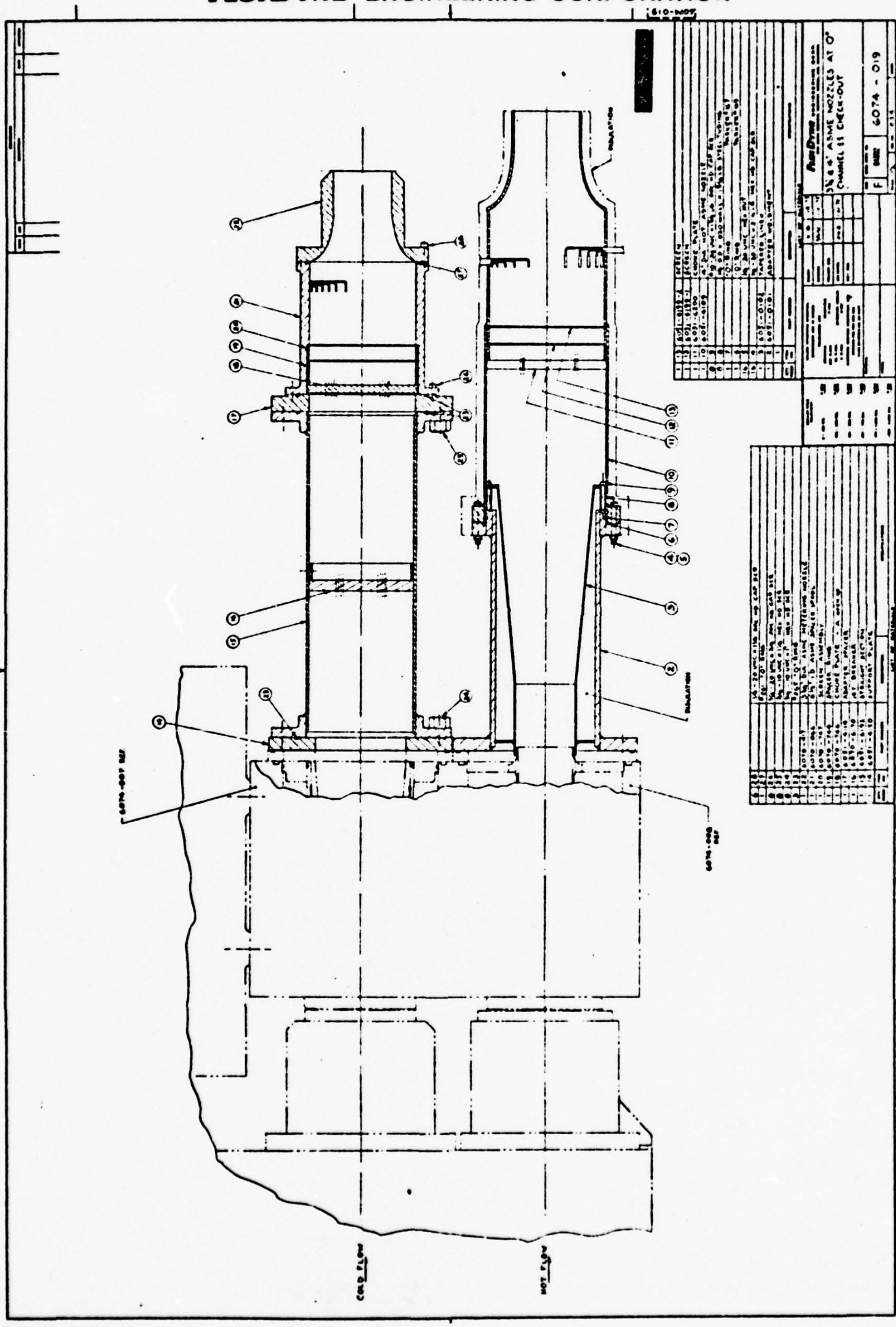


FIGURE 2a. ASME NOZZLE TEST ASSEMBLY DRAWING

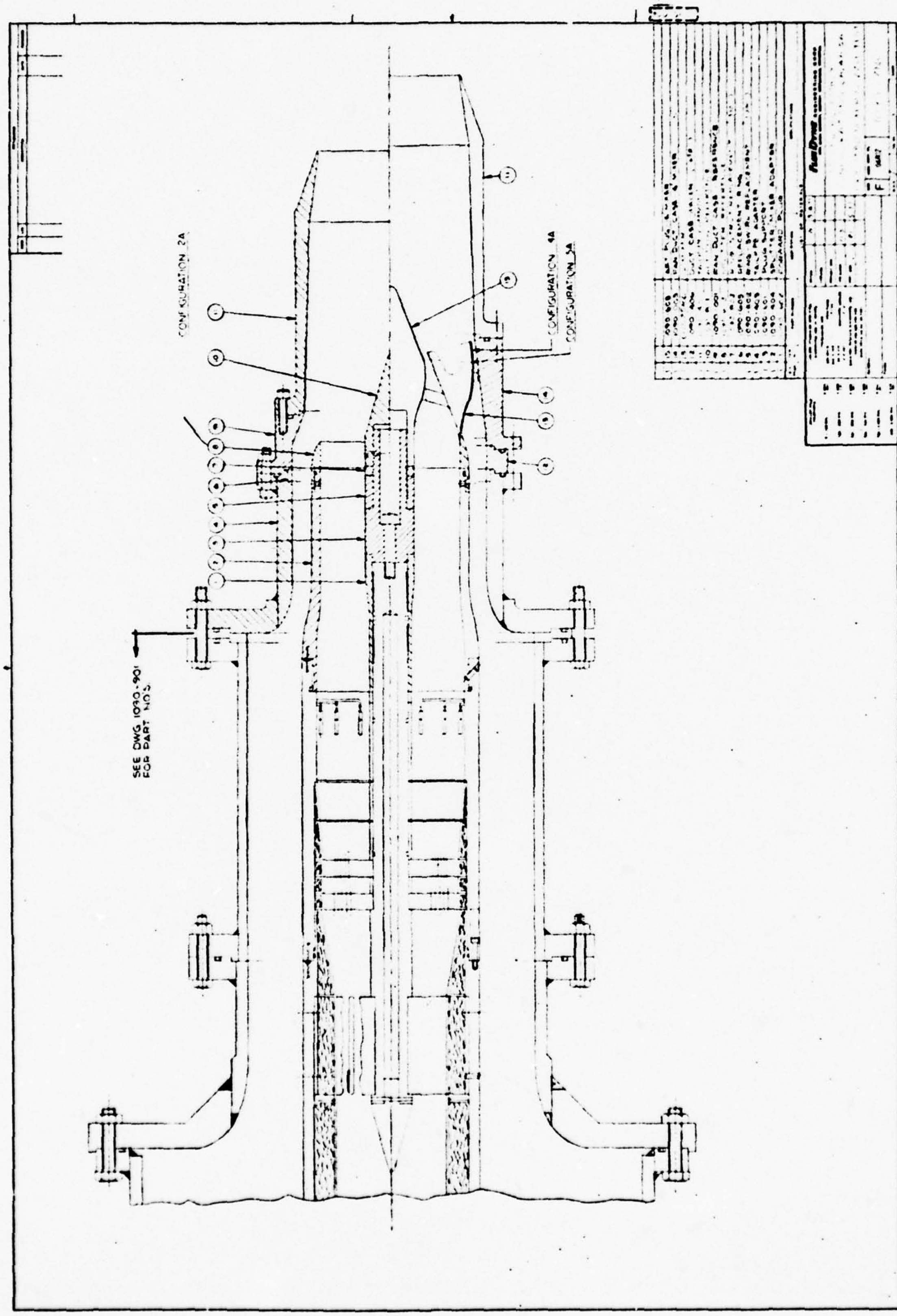


FIGURE 2b. MODEL ASSEMBLY - CONFIGURATIONS 2A, 4A, 5A

Run Numbers	Config.	Splitter or Mixer	Tailpipe	Fan Duct Case	Swirl, TEGV, Tangential Struts, Fan P_t Distortion	Other
1-10	Dual ASME					
11-38, 214	2A	Reference Splitter	Common (401)	Reference (001)	No	
114-123	5A	16" Mixer, Cutback, Scalloped	Common (401)	16" Mixer (003)	No	1090-406 duct case spacer
124-153	4A	16" Mixer, Scalloped	Common (401)	16" Mixer (003)	No	1090-406 duct case spacer

FIGURE 3. SUMMARY OF TEST CONFIGURATIONS

FLUIDYNE ENGINEERING CORPORATION

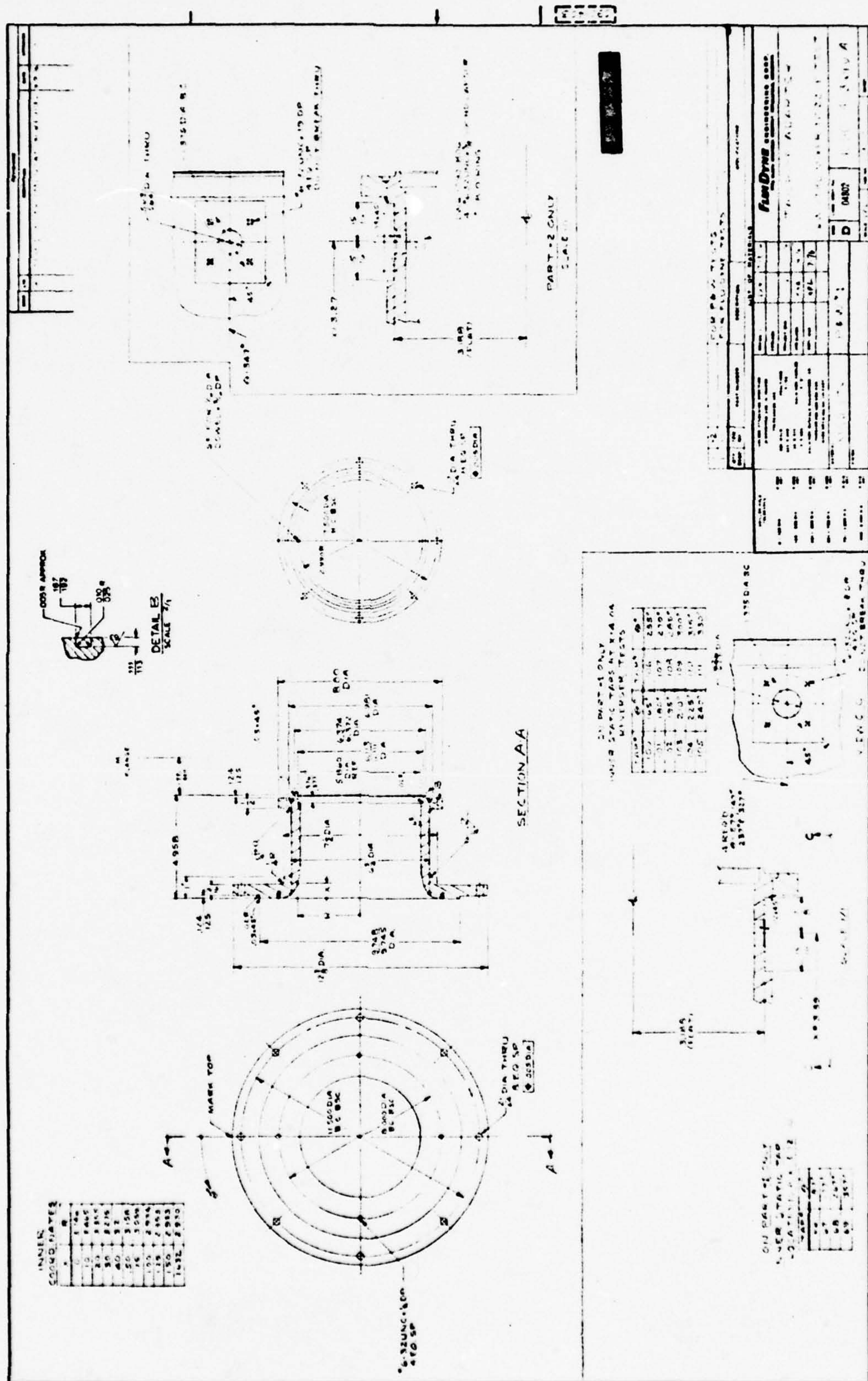


FIGURE 4a. TAILPIPE ADAPTER

FLUIDYNE ENGINEERING CORPORATION

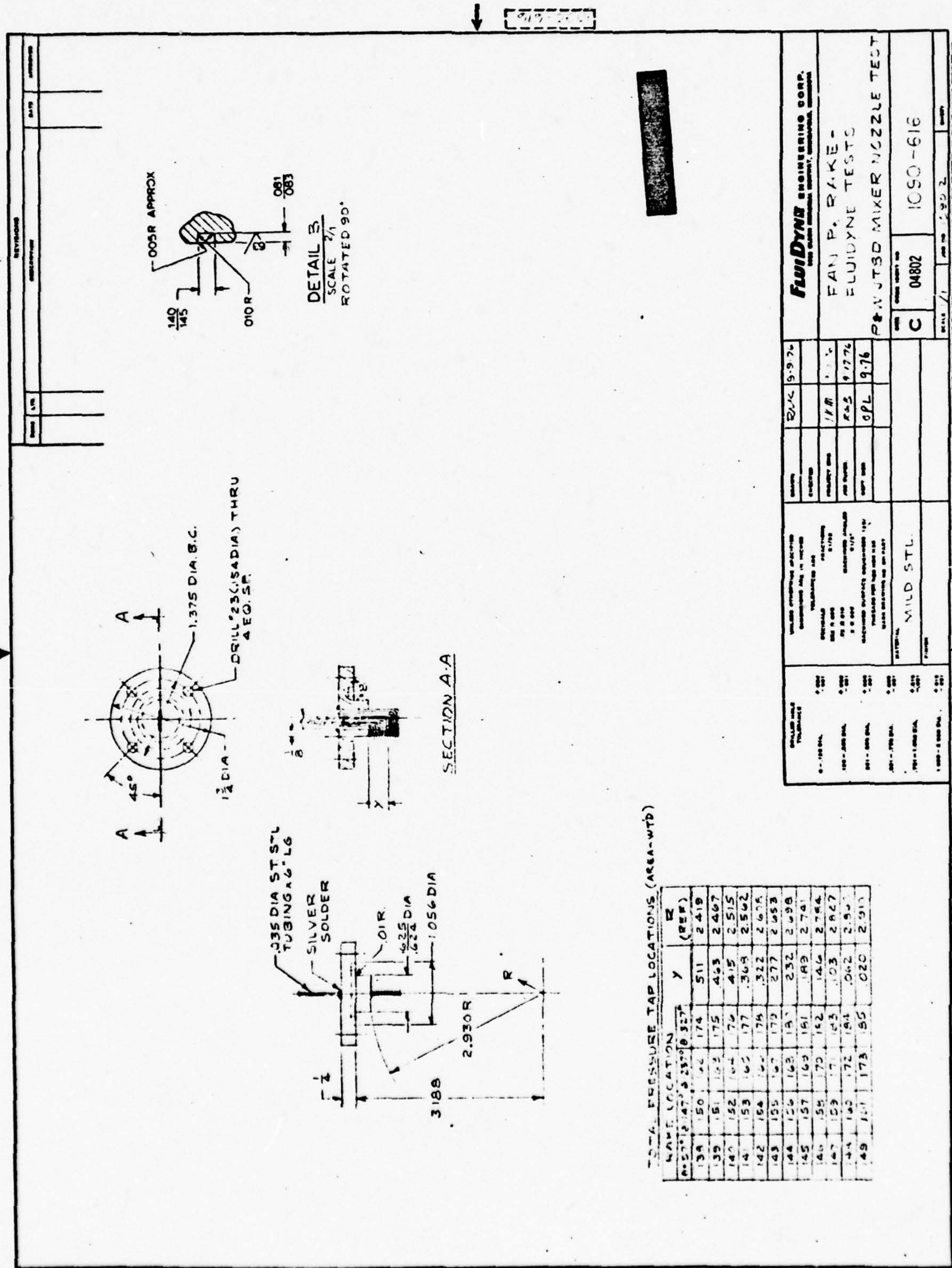


FIGURE 4b. FAN P_t RAKE

FLUIDYNE ENGINEERING CORPORATION

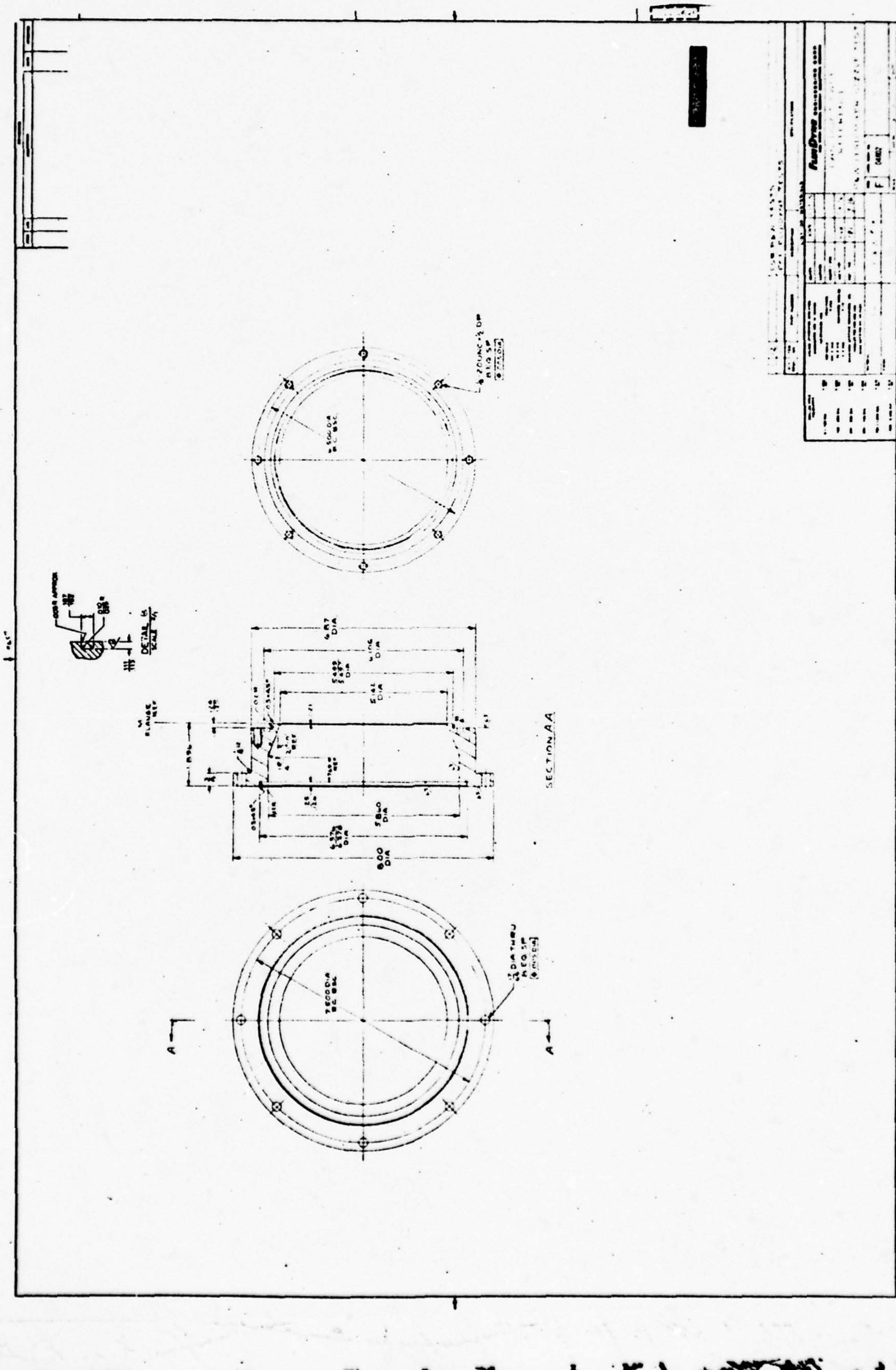


FIGURE 4c. FAN DUCT CASE-REFERENCE

FluiDyne ENGINEERING CORPORATION

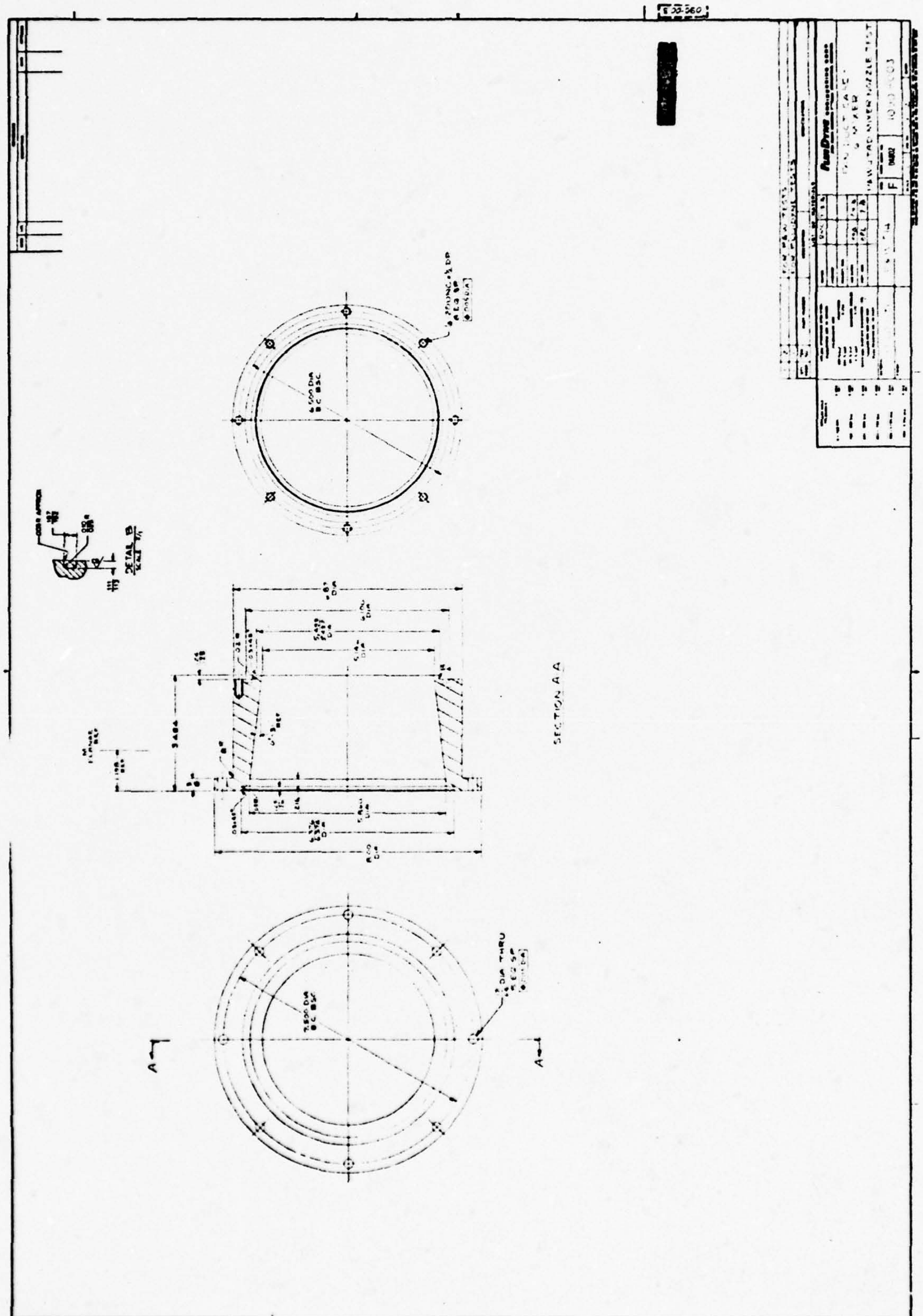


FIGURE 4d. FAN DUCT CASE - 16" MIXER

FLUIDYNE ENGINEERING CORPORATION

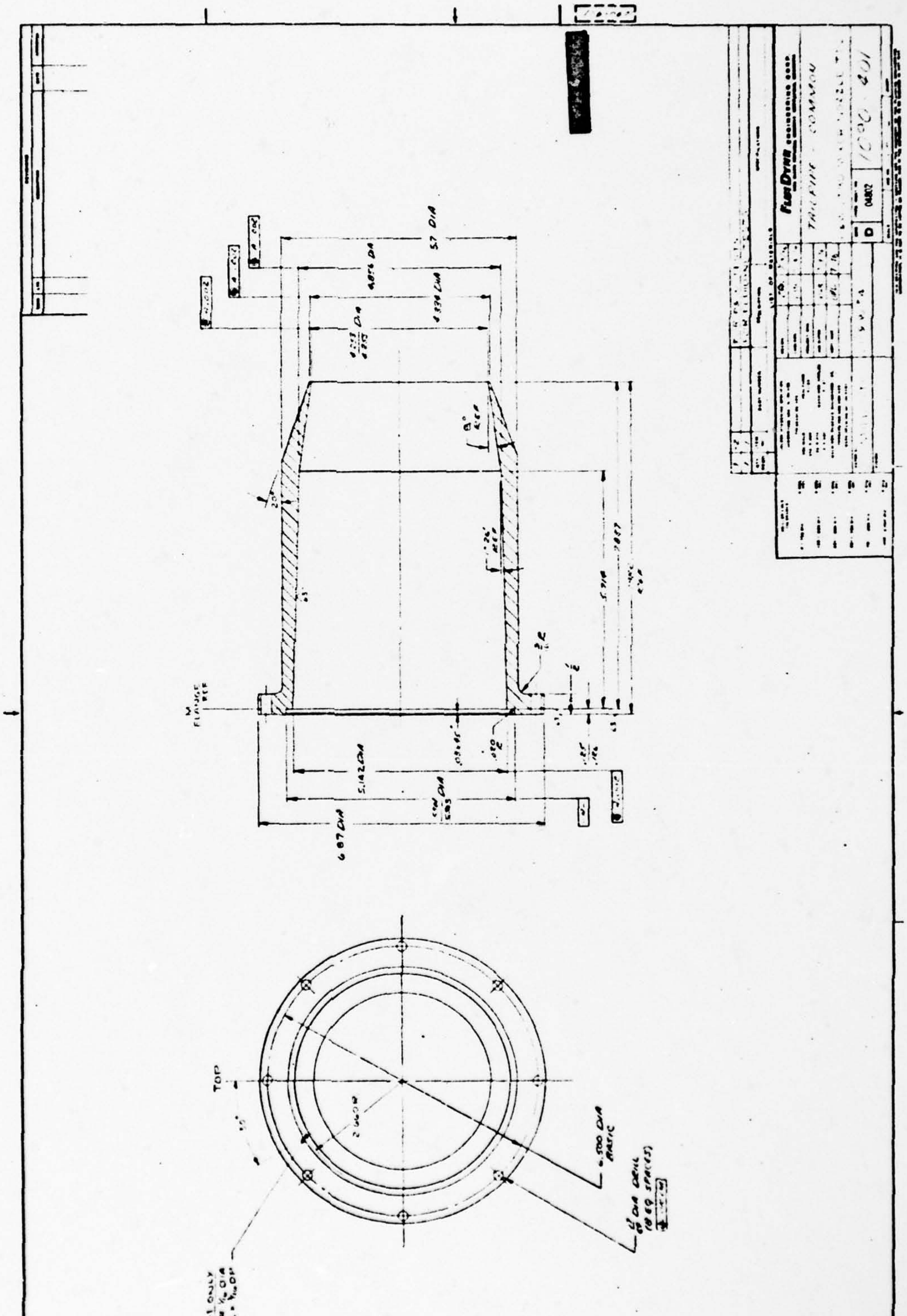


FIGURE 4e. TAILPIPE - COMMON

FLUIDYNE ENGINEERING CORPORATION

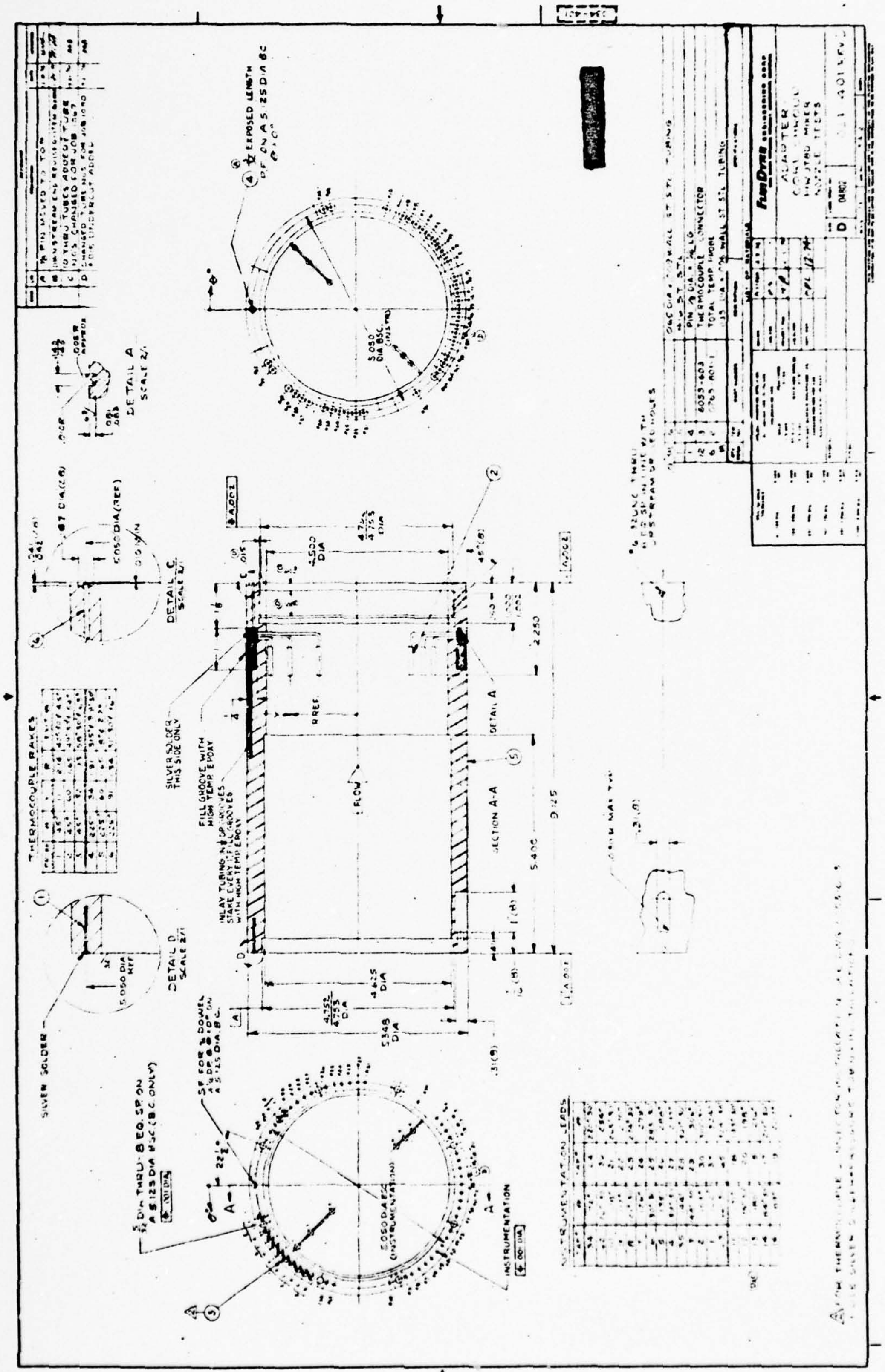


FIGURE 4f. CORE SHROUD ADAPTER

FLUIDYNE ENGINEERING CORPORATION

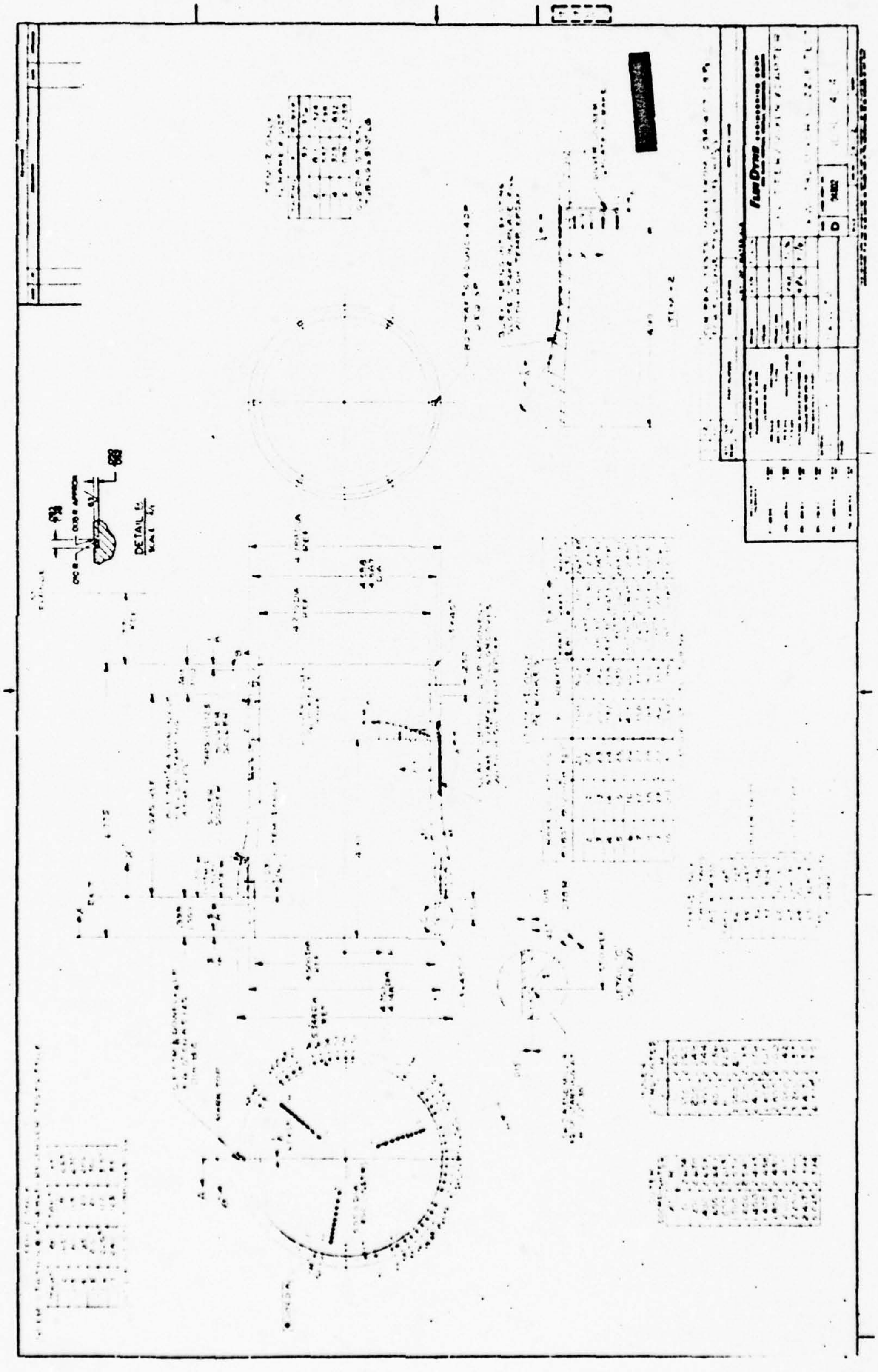


FIGURE 4g. SPLITTER/MIXER ADAPTER

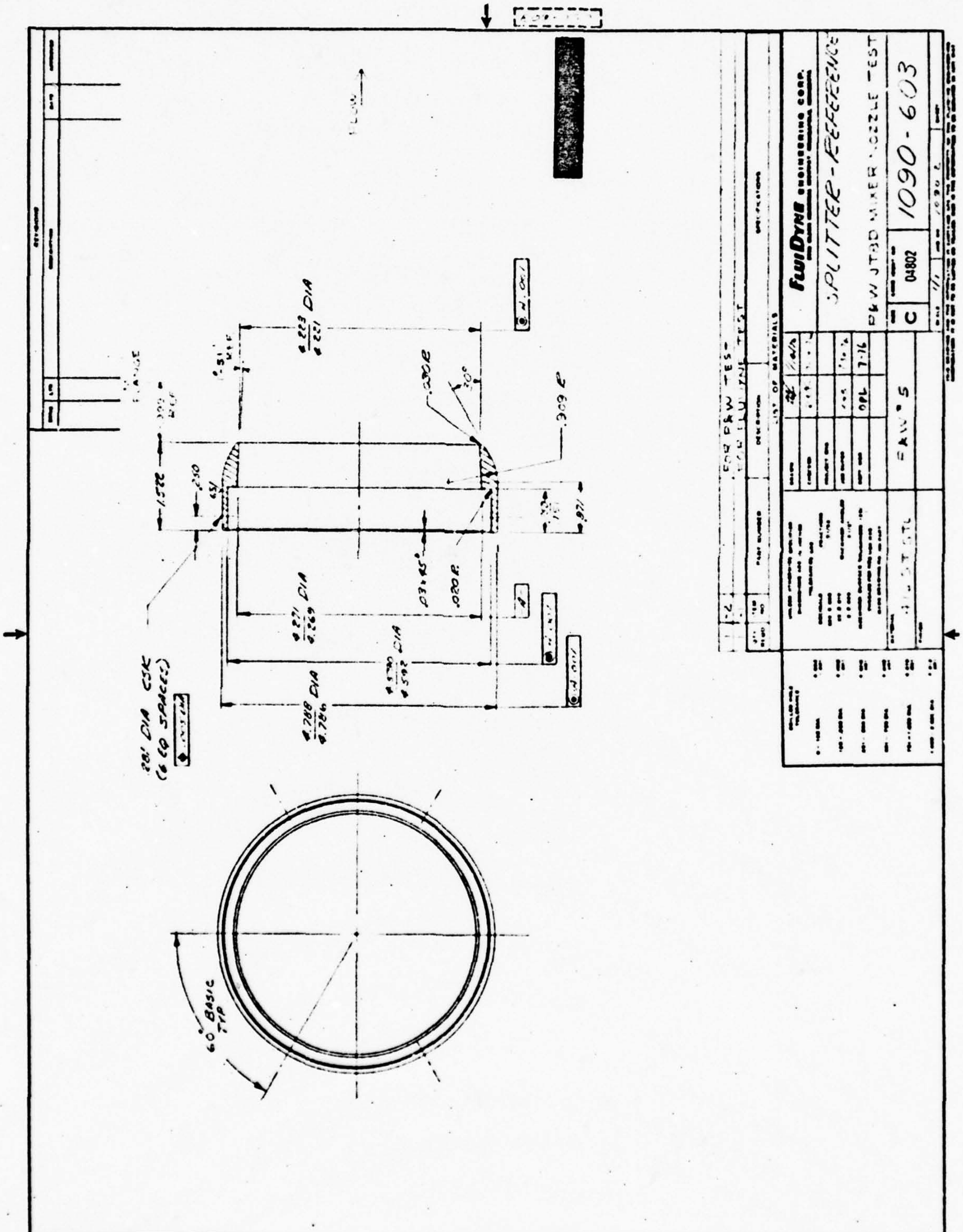
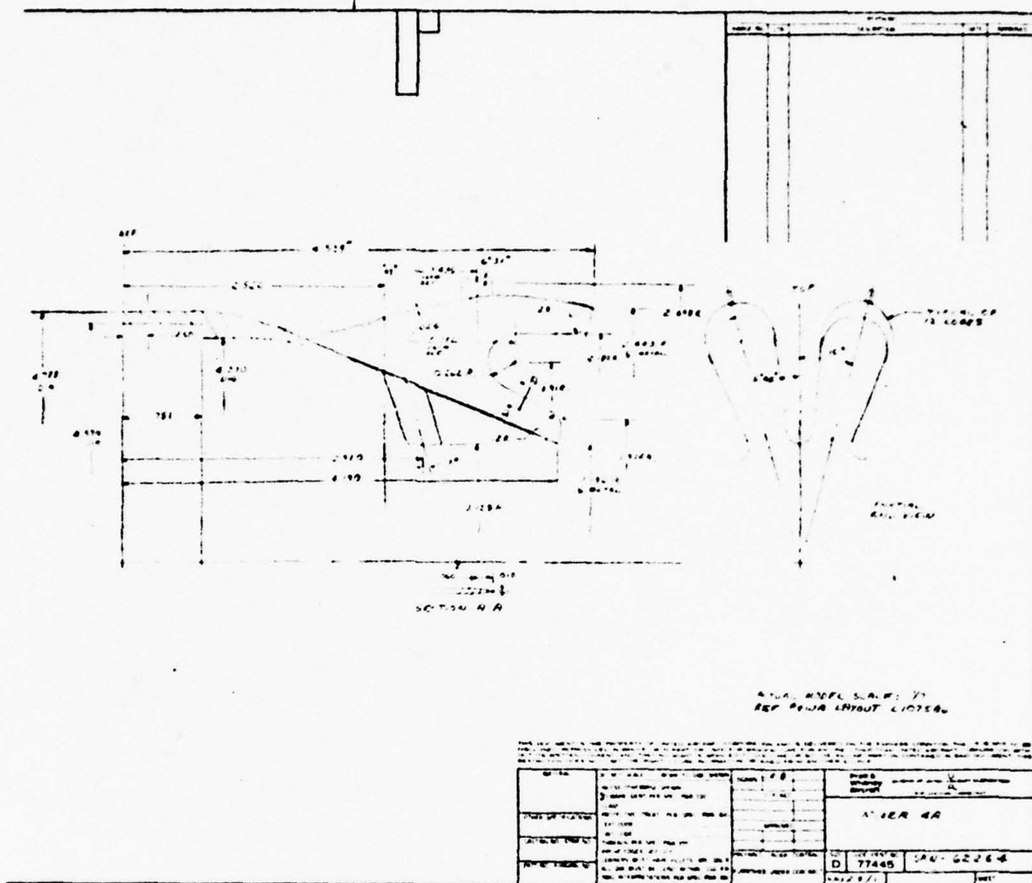


FIGURE 4h. SPLITTER - REFERENCE



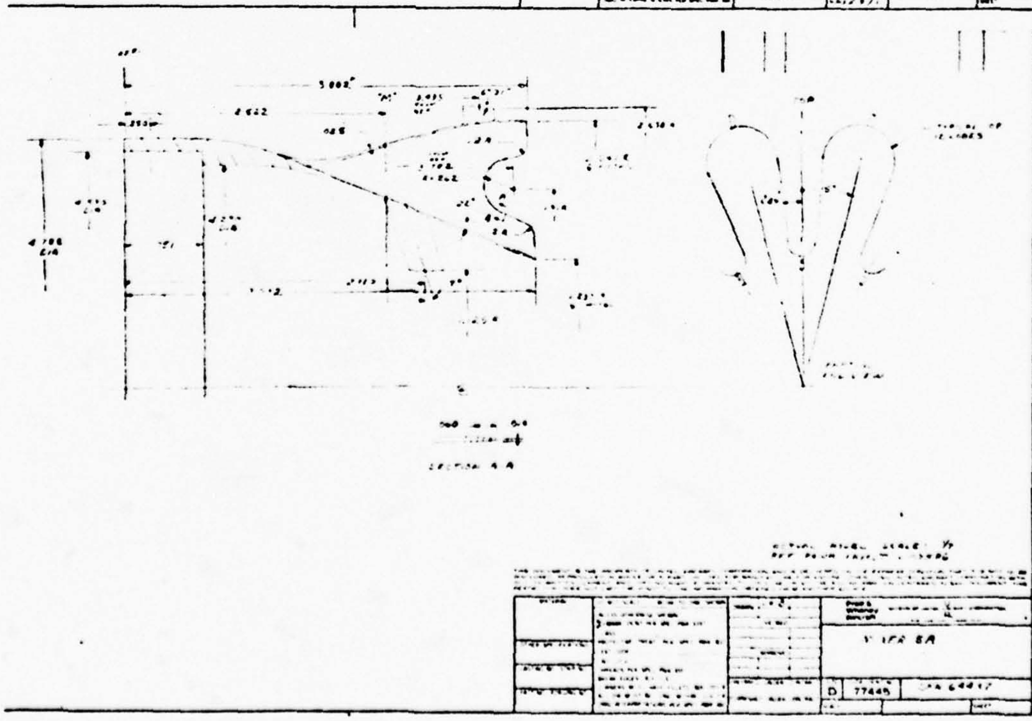


FIGURE 4i. MIXER - CONFIGURATION 4A and 5A

FLUIDYNE ENGINEERING CORPORATION

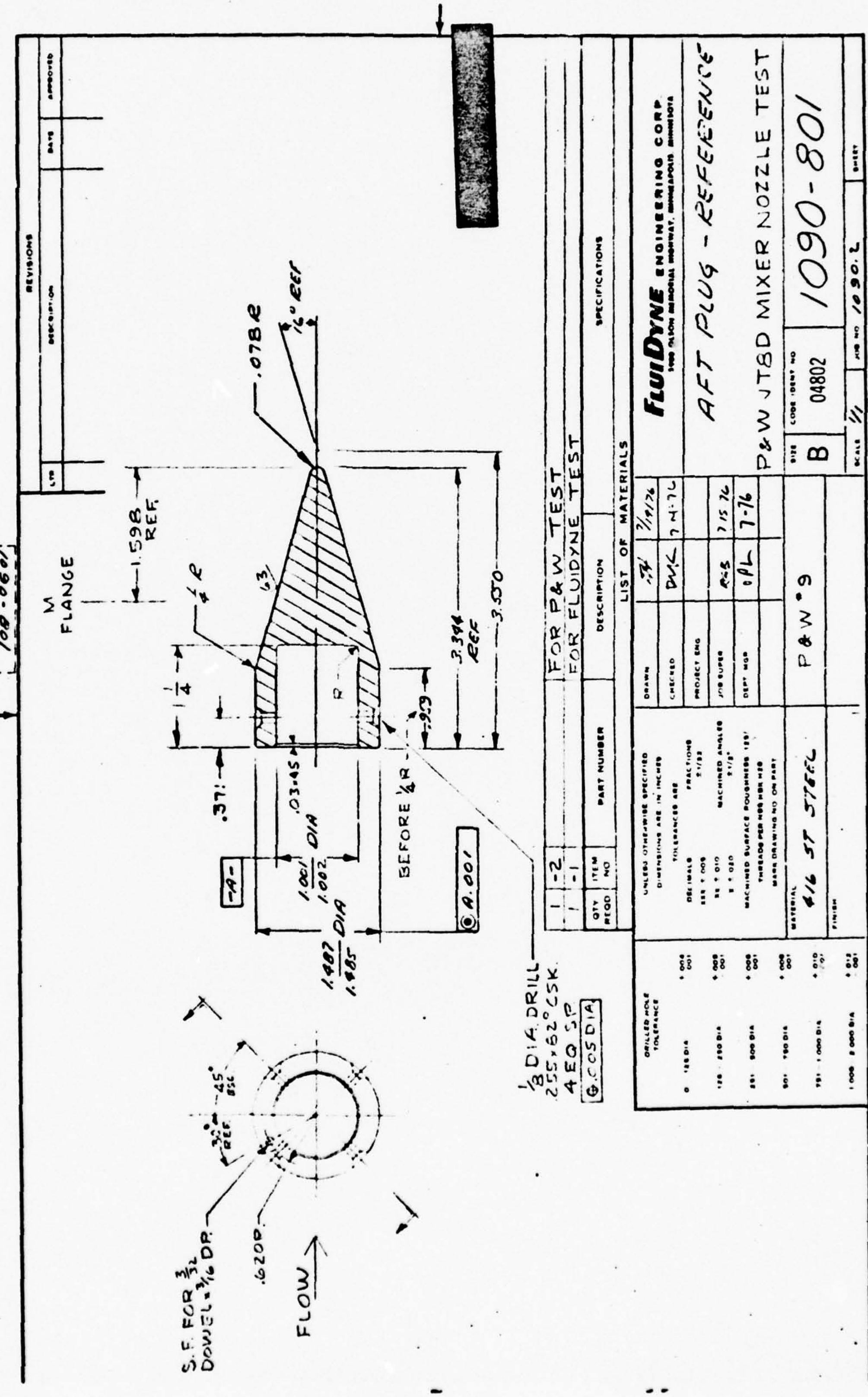


FIGURE 4j. AFT PLUG - REFERENCE

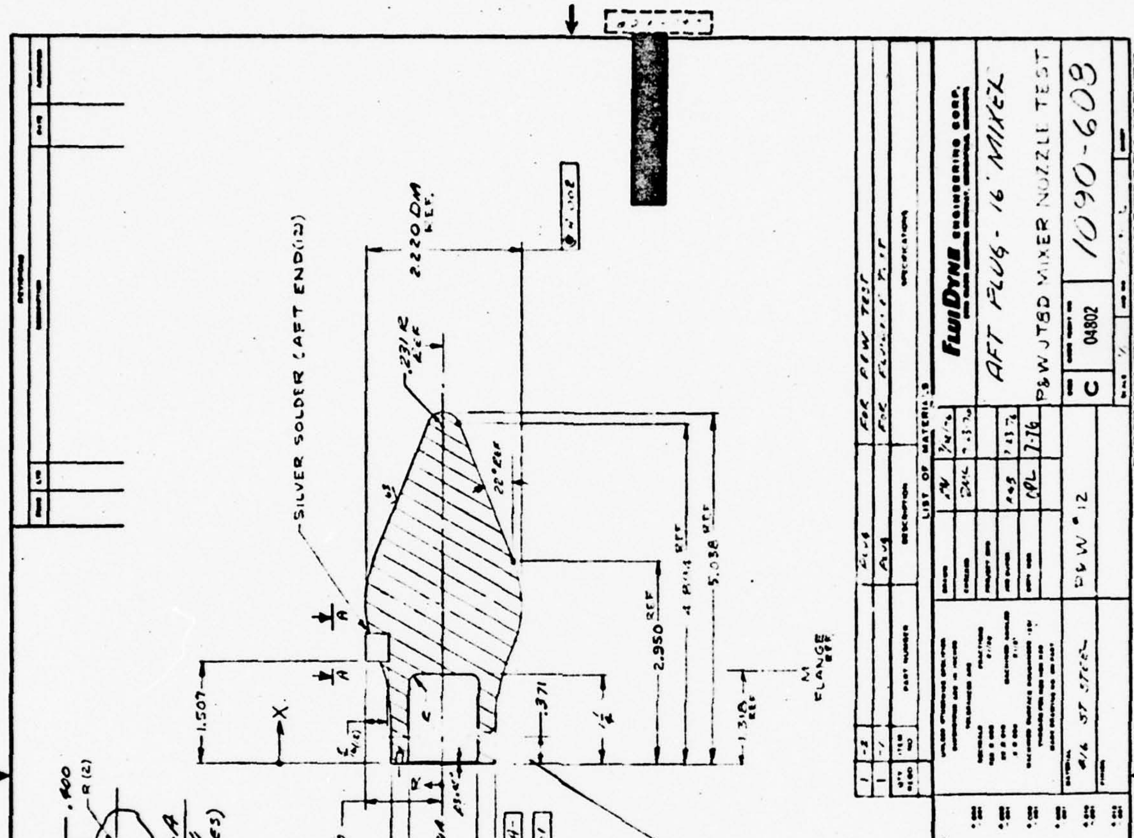
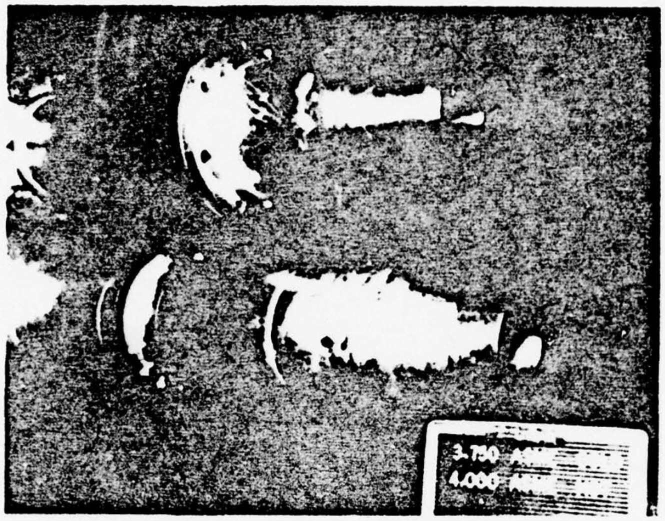
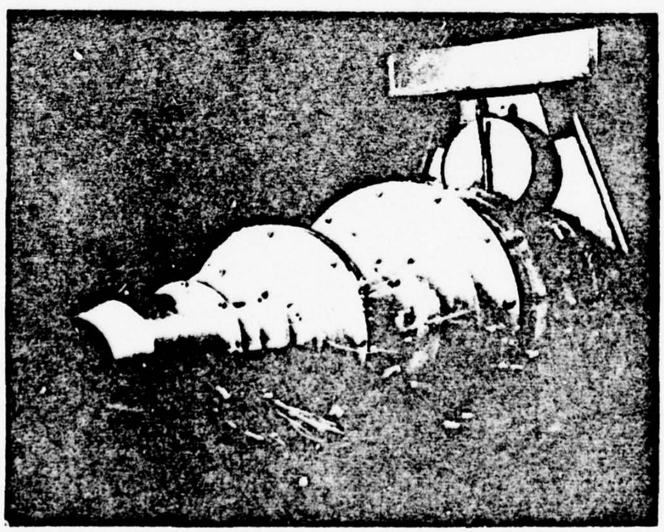


FIGURE 4k. AFT PLUG - 16" MIXER

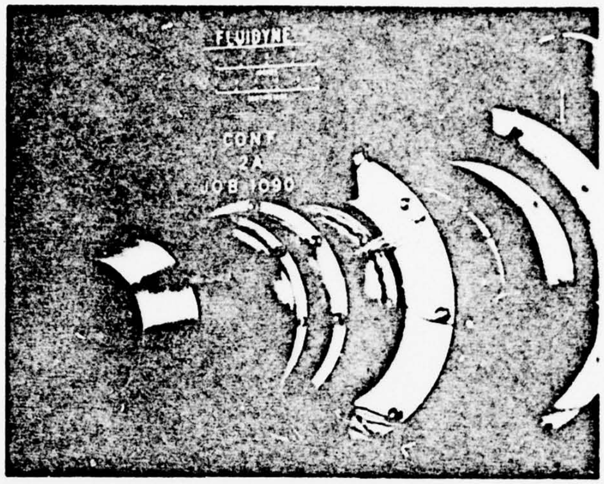


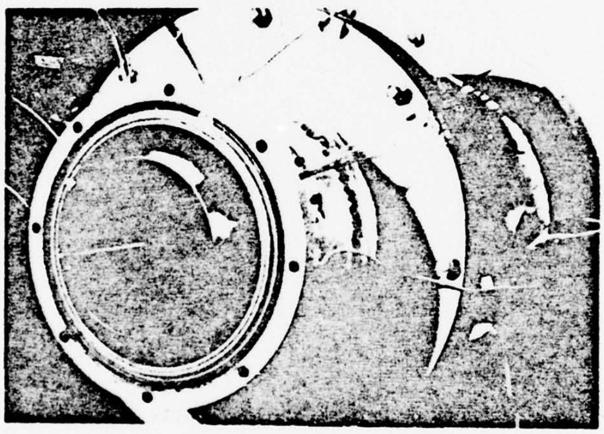
ASME nozzle
installation



typical mixer
nozzle installation

FIGURE 5a. MODEL PHOTOGRAPHS





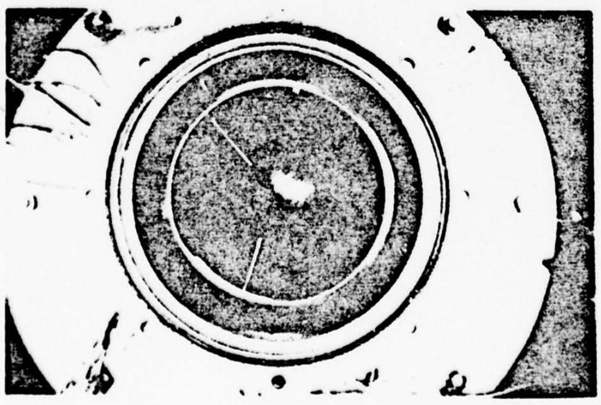


FIGURE 5b. MODEL PHOTOGRAPHS

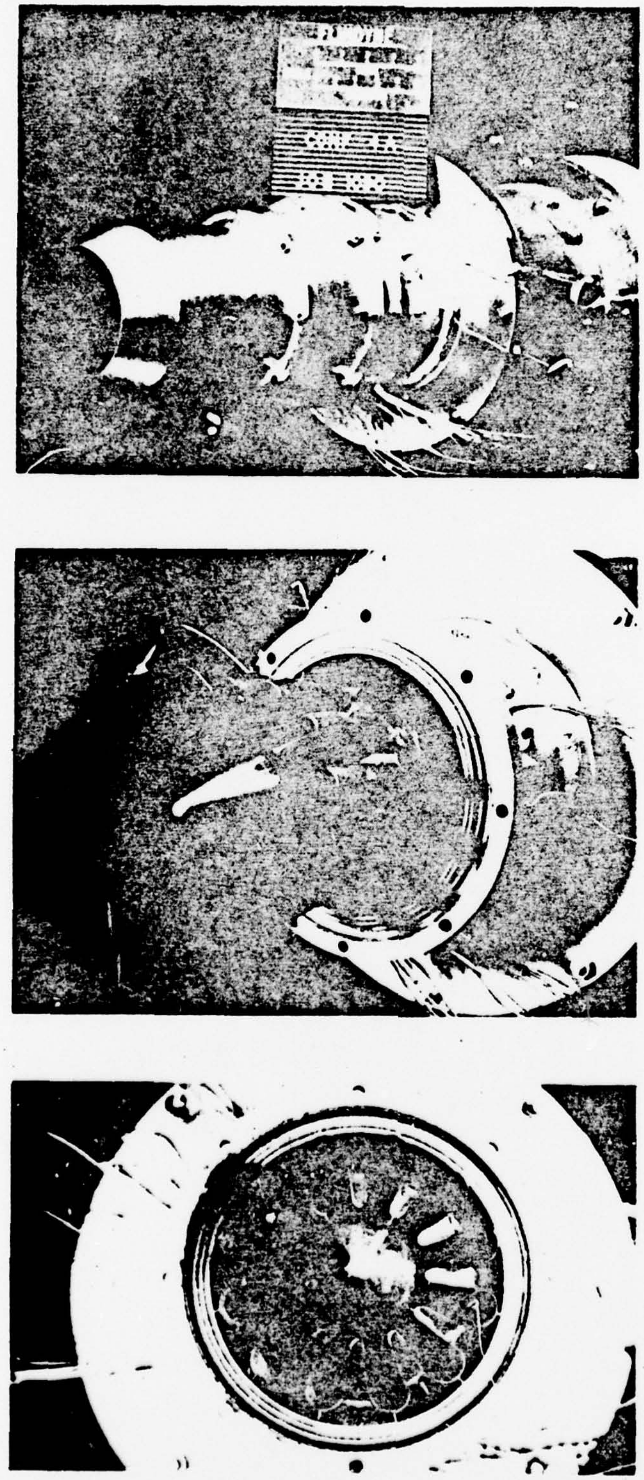
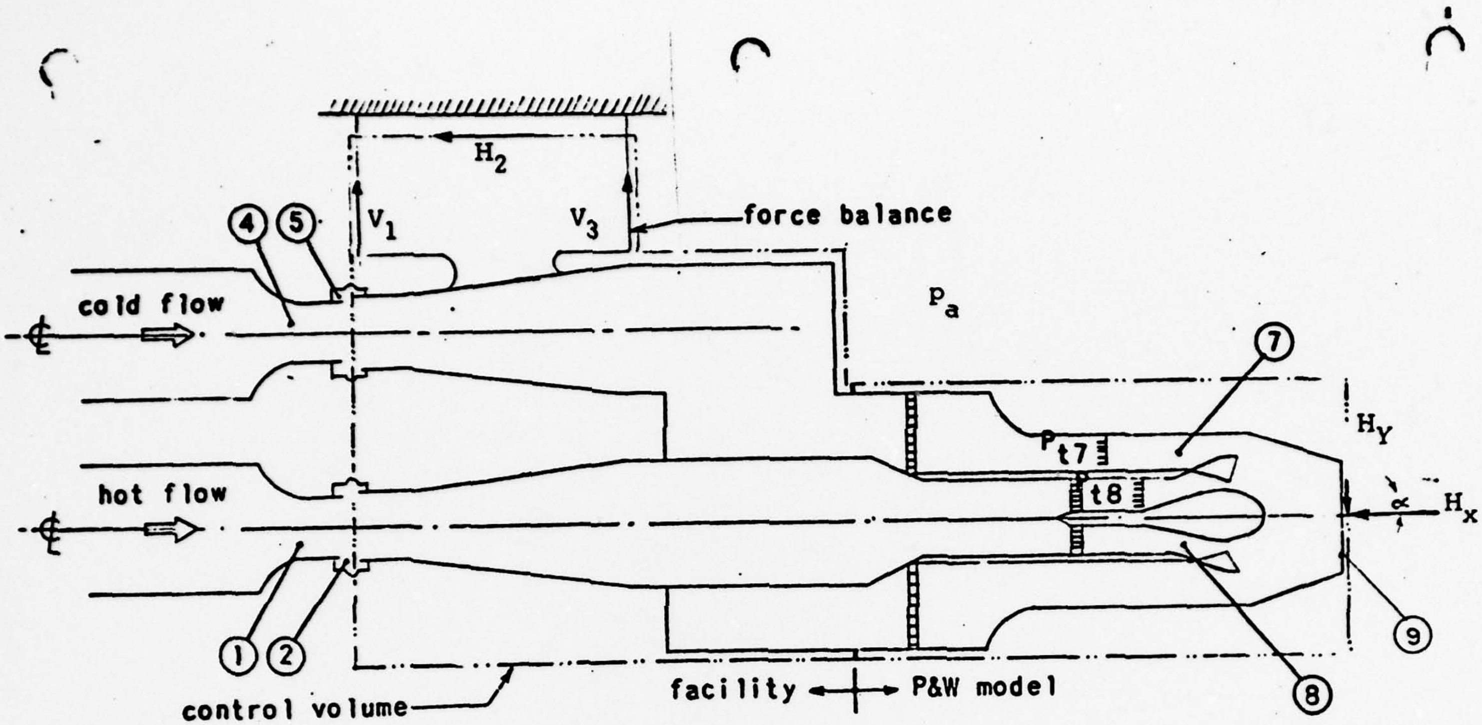


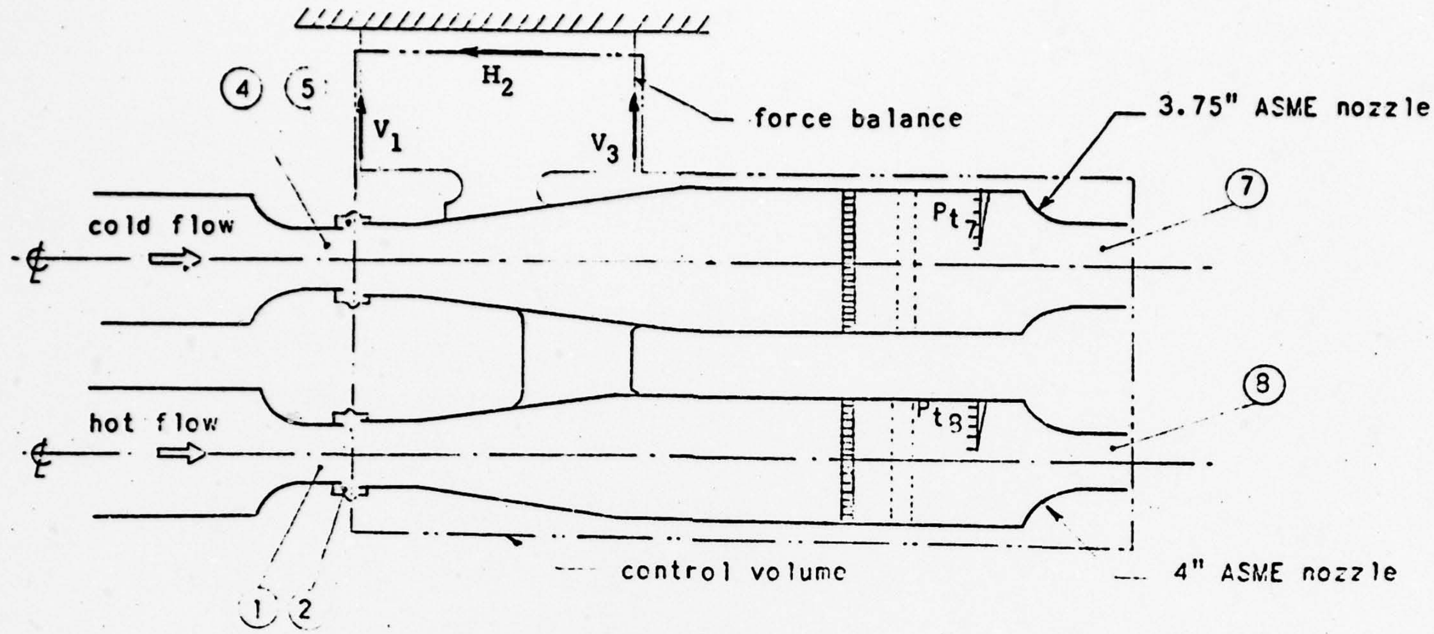
FIGURE 5c. MODEL PHOTOGRAPHS

FIGURE 5d. MODEL PHOTOGRAPHS



Station	Description
1	ASME Meter Throat (core flow)
2	Flexible Seal (core flow)
4	ASME Meter Throat (fan flow)
5	Flexible Seal (fan flow)
7	Fan Nozzle
8	Core Nozzle
9	Nozzle Exit

FIGURE 6a. STATION NOTATION, MIXER MODEL TESTS



Station	Description
1	ASME Meter Throat (core flow)
2	Flexible Seal (core flow)
4	ASME Meter Throat (fan flow)
5	Flexible Seal (fan flow)
7	3.75" Cold ASME Nozzle Throat
8	4" Hot ASME Nozzle Throat

FIGURE 6b. STATION NOTATION, ASME CHECKOUT TESTS

Config.	Run No.	λ_7	λ_8	T_{t_8}/T_{t_7}	C_T	C_{D_7}	C_{D_8}
	1.0	1.506	1.489	1.008	.9919	.9894	.9882
3.75"	2.0	1.761	1.745	1.007	.9932	.9907	.9885
ASME	3.1	2.010	1.985	1.006	.9944	.9904	.9893
cold,	4.1	2.258	2.242	1.004	.9950	.9904	.9893
upper	5.0	2.510	2.490	1.003	.9954	.9927	.9921
&							
4"	6.2	1.504	1.529	2.489	.9916	.9883	.9908
ASME	7.2	1.762	1.752	2.483	.9914	.9895	.9890
hot,	8.2	2.011	1.993	2.472	.9959	.9926	.9902
lower	9.2	2.264	2.257	2.455	.9965	.9917	.9876
	10.2	2.518	2.485	2.446	.9966	.9919	.9879

Config.	Run No.	λ_7	λ_8	λ_7/λ_8	T_{t_8}/T_{t_7}	C_{T_r}	$C_{D_7}A_7$	$C_{D_8}A_8$	C_{D_9}	W_7/W_8
2A	11.4	1.495	1.609	.929	.998	.9884	4.993	8.525	.951	.530
	12.3	2.065	2.214	.932	.997	.9929	5.279	8.636	.979	.569
	13.2	2.533	2.717	.932	.997	.9929	5.286	8.665	.982	.568
	14.2	3.011	3.236	.930	.997	.9886	5.245	8.695	.981	.560
	15.0	1.601	1.609	.995	1.000	.9888	5.889	7.622	.951	.767
	16.0	2.210	2.221	.995	.999	.9933	6.047	7.825	.976	.768
	17.1	2.403	2.714	.885	.998	.9932	4.681	9.304	.984	.445
	18.1	2.833	3.223	.879	.996	.9894	4.563	9.376	.981	.427
	19.1	1.490	1.617	.921	2.117	.9923	4.759	8.646	.943	.721
	20.1	2.057	2.195	.937	2.125	.9973	5.149	8.670	.973	.817
	21.0	2.481	2.698	.919	2.119	.9974	4.952	8.887	.974	.751
	22.0	2.934	3.204	.916	2.117	.9931	4.927	8.950	.977	.739
	23.0	1.600	1.594	1.004	2.128	.9935	5.774	7.575	.940	1.124
	24.0	2.204	2.206	.999	2.130	.9967	5.885	7.891	.970	1.095
	25.1	2.402	2.712	.886	2.113	.9959	4.503	9.363	.976	.624
	26.1	2.832	3.209	.882	2.111	.9936	4.481	9.372	.975	.618
	27.1	1.493	1.620	.921	2.271	.9932	4.804	8.540	.939	.764
	28.2	2.051	2.209	.928	2.265	.9977	5.024	8.752	.969	.809
	29.0	2.529	2.713	.932	2.257	.9966	5.066	8.749	.972	.818
	30.3	2.983	3.215	.928	2.264	.9949	5.016	8.827	.974	.800
	31.0	1.604	1.605	1.000	2.275	.9939	5.748	7.614	.940	1.146
	32.0	2.212	2.208	1.001	2.272	.9976	5.924	7.815	.967	1.154
	33.0	2.404	2.717	.885	2.256	.9986	4.467	9.395	.976	.638
	34.0	2.843	3.224	.882	2.269	.9932	4.453	9.428	.977	.633
	35.1	1.489	1.612	.924	2.387	.9949	4.747	8.652	.943	.766
	36.0	2.062	2.208	.934	2.404	.9998	5.089	8.729	.973	.852
	37.0	2.533	2.719	.932	2.402	.9976	5.053	8.777	.973	.839
	38.0	3.002	3.210	.935	2.392	.9960	5.106	8.741	.975	.853
	214.0	1.668	1.823	.915	2.269	.9966	4.772	8.819	.954	.744

FIGURE 7. RUN SCHEDULE AND MAJOR TEST RESULTS
(Sheet 1 of 3)

Config.	Run No.	λ_7	λ_8	λ_7/λ_8	T_{t_8}/T_{t_7}	C_{T_r}	$C_{D_7}A_7$	$C_{D_8}A_8$	C_{D_9}	W_7/W_8
5A	114.0	1.492	1.606	.929	.992	.9767	5.535	7.713	.932	.646
	115.0	1.676	1.790	.932	.992	.9789	5.633	7.756	.942	.668
	116.0	2.056	2.199	.935	.993	.9851	5.788	7.851	.960	.687
	117.0	2.512	2.685	.936	.993	.9875	5.829	7.894	.966	.688
	118.0	2.982	3.185	.936	.989	.9871	5.824	7.890	.965	.687
	119.0	1.488	1.599	.931	2.286	.9819	5.252	7.625	.906	.950
	120.0	1.675	1.802	.930	2.280	.9881	5.339	7.693	.917	.973
	121.0	2.052	2.197	.934	2.272	.9964	5.508	7.825	.938	.999
	122.0	2.516	2.696	.933	2.275	1.0009	5.529	7.856	.942	.999
	123.0	2.988	3.192	.936	2.282	1.0016	5.551	7.832	.942	1.011
4A	124.0	1.496	1.607	.931	1.000	.9764	5.473	8.059	.947	.616
	125.0	2.043	2.194	.931	1.000	.9871	5.602	8.251	.969	.632
	126.0	2.517	2.687	.937	1.000	.9881	5.641	8.220	.970	.643
	127.0	2.990	3.181	.940	1.000	.9862	5.669	8.218	.971	.649
	128.0	1.603	1.605	.999	.998	.9753	5.869	7.650	.946	.765
	129.0	2.200	2.190	1.004	.997	.9864	6.010	7.793	.966	.773
	130.0	2.383	2.691	.885	.993	.9868	5.355	8.513	.970	.555
	131.0	2.818	3.181	.886	.993	.9846	5.385	8.537	.974	.557
	132.0	1.499	1.608	.933	2.159	.9798	5.290	7.900	.923	.900
	133.0	2.056	2.198	.935	2.160	.9926	5.481	8.087	.949	.938
	134.0	2.512	2.698	.931	2.134	.9972	5.458	8.137	.951	.919
	135.0	2.992	3.190	.938	2.135	.9968	5.482	8.053	.947	.940
	136.0	1.617	1.614	1.002	2.139	.9784	5.724	7.567	.930	1.115
	137.0	2.201	2.189	1.006	2.146	.9919	5.902	7.696	.951	1.138
	138.0	1.499	1.602	.935	2.325	.9792	5.300	7.838	.919	.948
	139.0	2.051	2.186	.938	2.285	.9940	5.494	8.039	.947	.977
	140.0	2.513	2.689	.935	2.288	1.0008	5.475	8.071	.948	.968
	141.0	2.988	3.177	.941	2.294	1.0004	5.492	8.097	.951	.975
	142.0	1.605	1.605	1.000	2.296	.9808	5.690	7.486	.922	1.159
	143.0	2.190	2.190	1.000	2.285	.9945	5.845	7.681	.946	1.160
	144.0	2.375	2.697	.881	2.281	1.0005	5.107	8.367	.943	.819
	145.0	2.820	3.178	.887	2.277	1.0010	5.154	8.398	.948	.829

FIGURE 7. RUN SCHEDULE AND MAJOR TEST RESULTS (Cont.)
(Sheet 2 of 3)

Config.	Run No.	λ_7	λ_8	λ_7/λ_8	T_{t_8}/T_{t_7}	C_{T_r}	$C_{D_7}A_7$	$C_{D_8}A_8$	C_{D_9}	W_7/W_8
4A(cont.)	146.0	1.485	1.597	.930	2.411	.9828	5.248	7.867	.917	.943
	147.1	2.052	2.211	.928	2.386	.9988	5.315	8.067	.940	.954
	148.1	2.509	2.714	.924	2.382	1.0024	5.332	8.117	.945	.946
	149.0	2.983	3.187	.936	2.400	1.0056	5.467	8.078	.948	.991
	150.0	2.380	2.692	.884	2.420	1.0003	5.105	8.351	.941	.849
	151.0	2.816	3.185	.884	2.422	1.0015	5.105	8.390	.944	.845
	152.0	2.695	2.698	.999	2.283	1.0006	5.847	7.705	.948	1.155
	153.0	2.695	2.686	1.003	2.145	.9963	5.880	7.700	.950	1.130

FIGURE 7. RUN SCHEDULE AND MAJOR TEST RESULTS (Cont.)
(Sheet 3 of 3)

Symbol	T_{t_8}/T_{t_7}	Run Nos.
○	1.000	1-5
◇	2.470	6-10

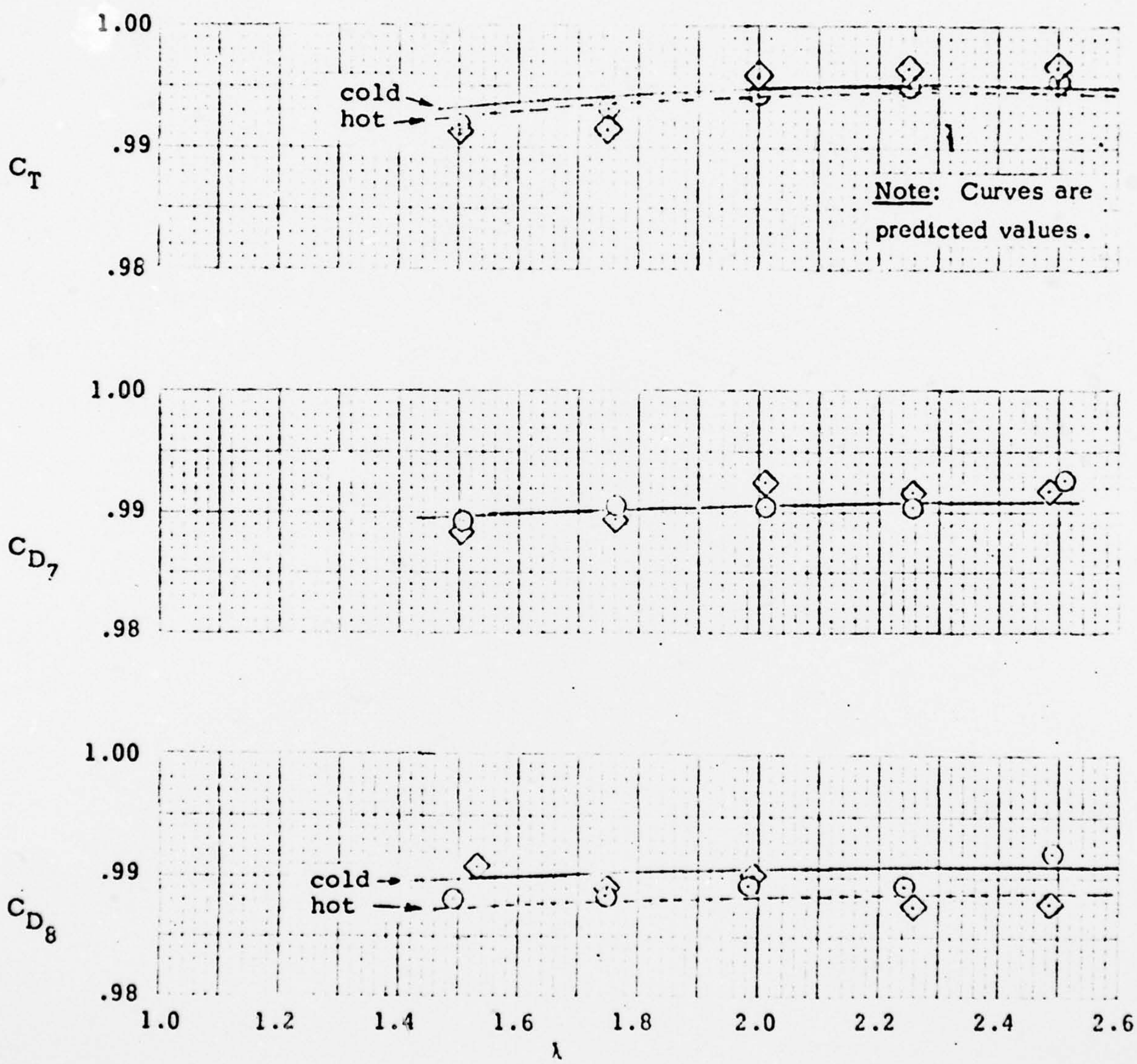


FIGURE 8. THRUST AND DISCHARGE COEFFICIENTS, ASME CHECKOUT TESTS

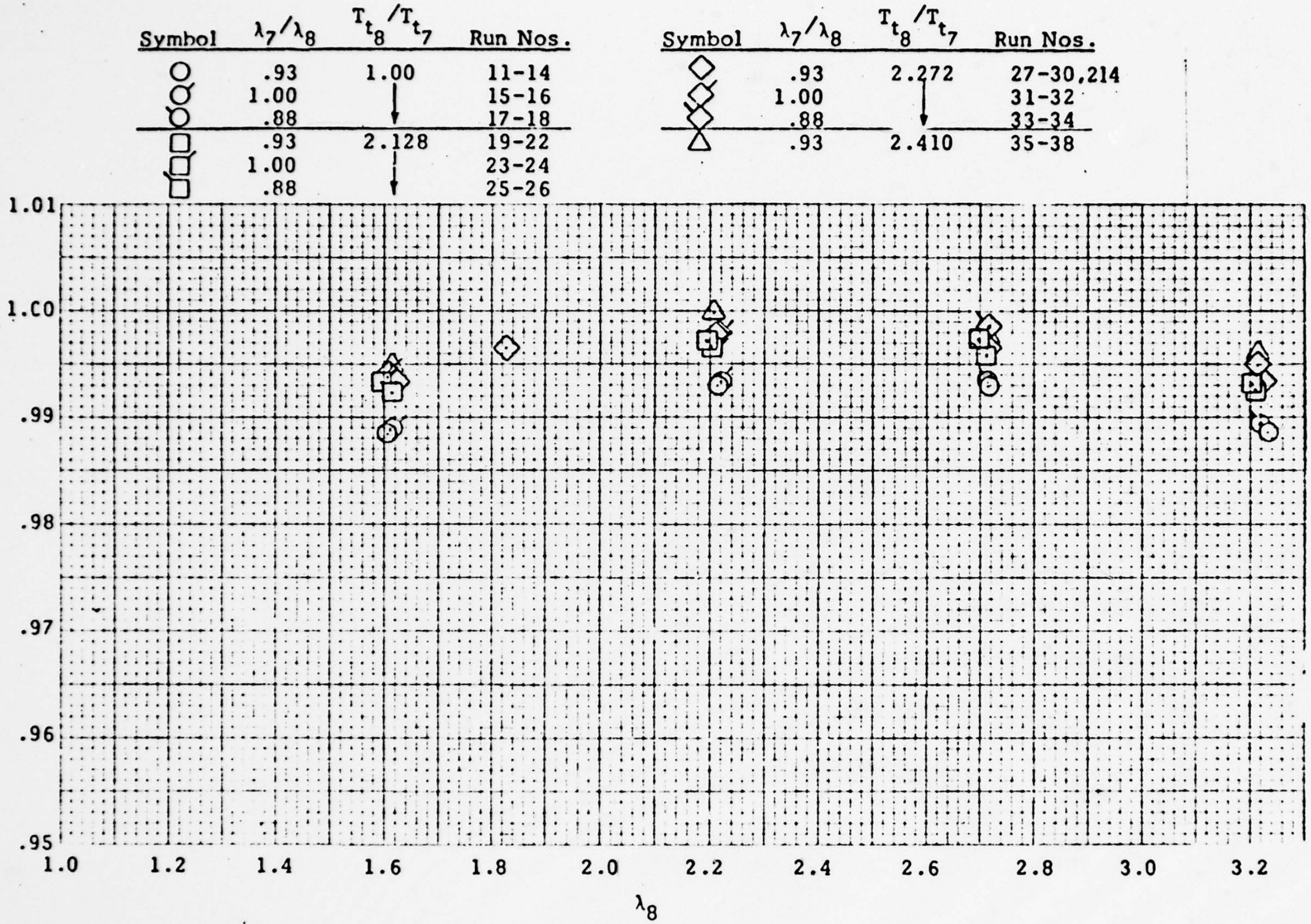


FIGURE 9a. THRUST COEFFICIENTS, CONFIGURATION 2A

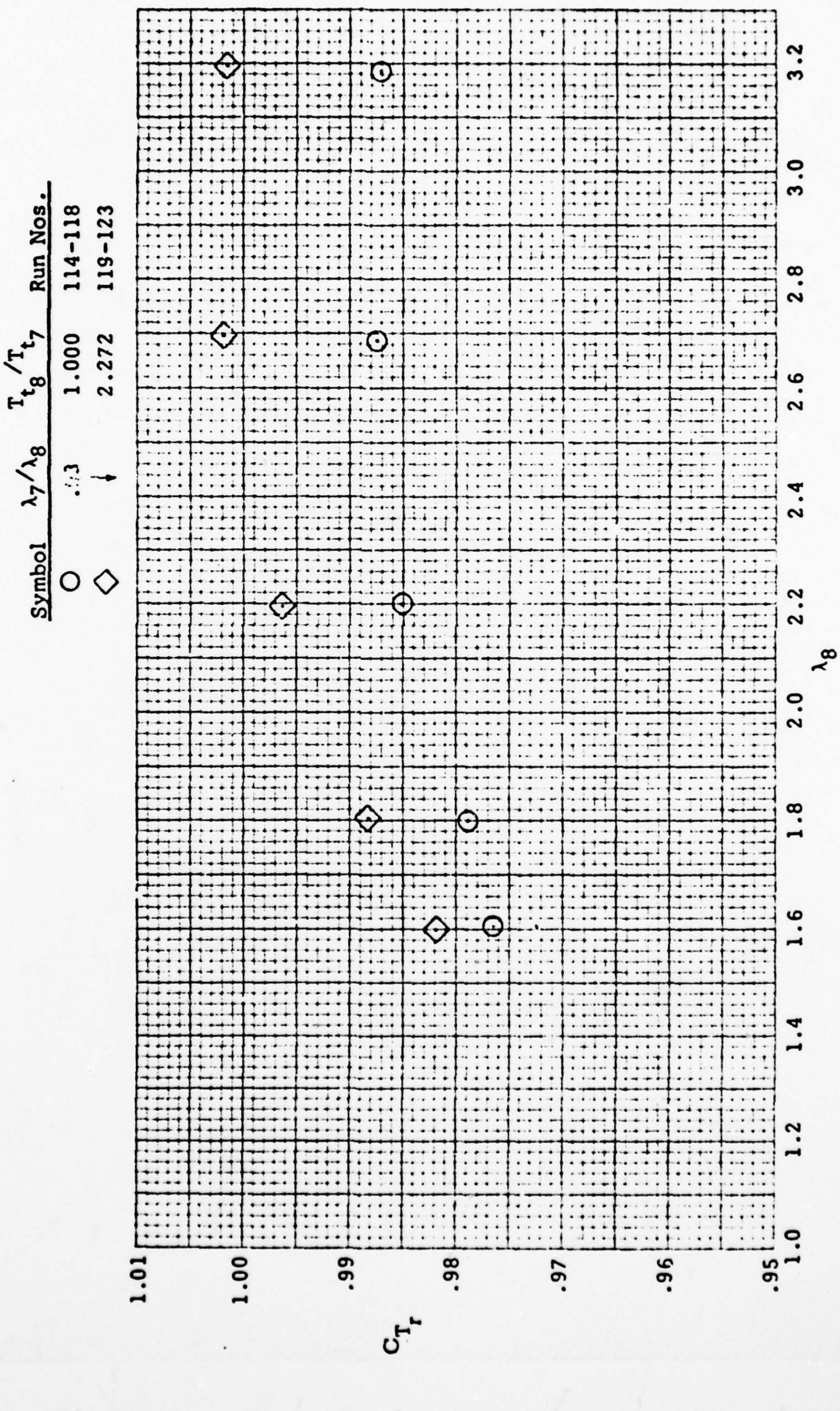


FIGURE 9b. THRUST COEFFICIENTS, CONFIGURATION 5A

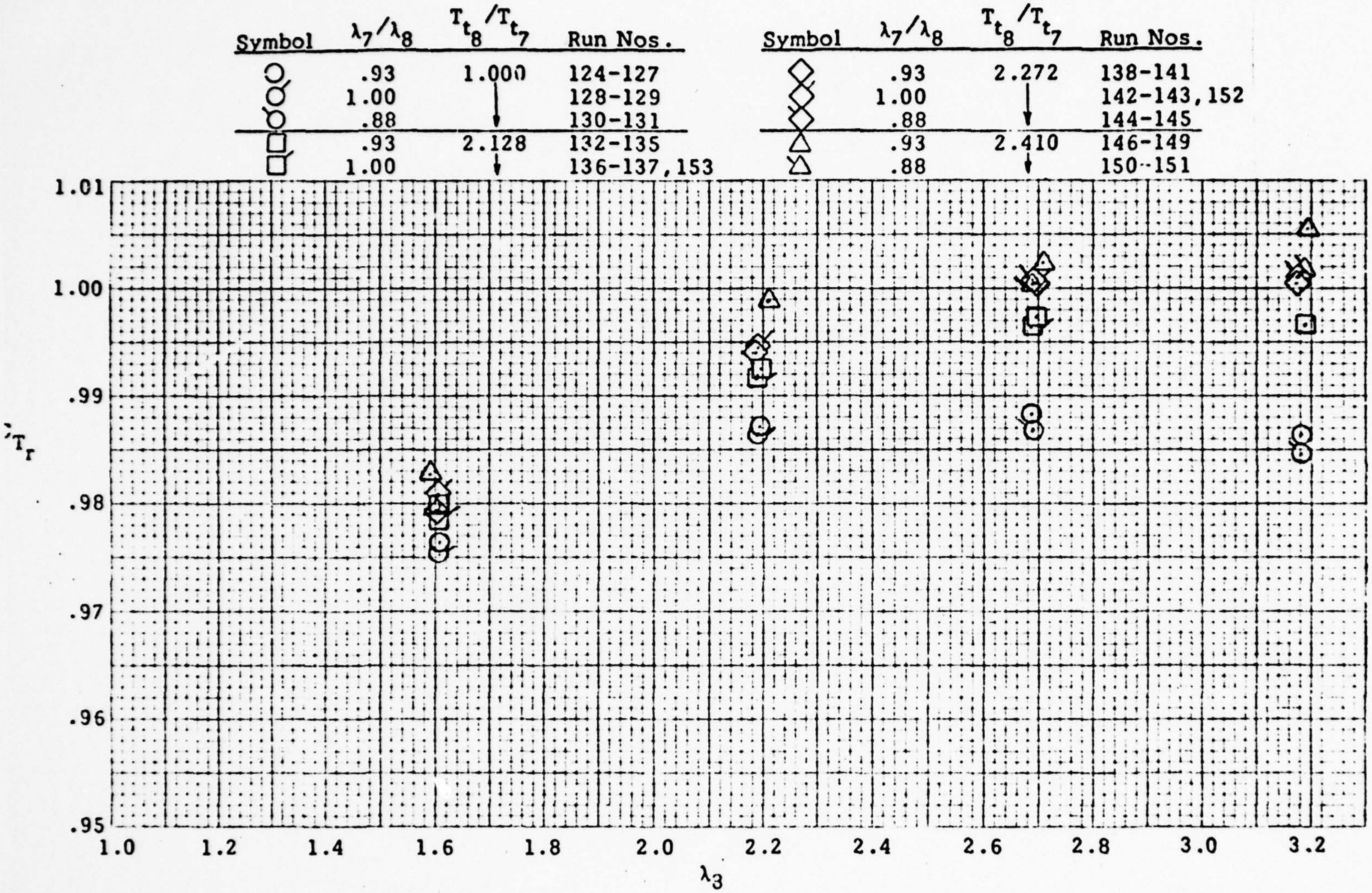


FIGURE 9c. THRUST COEFFICIENTS, CONFIGURATION 4A

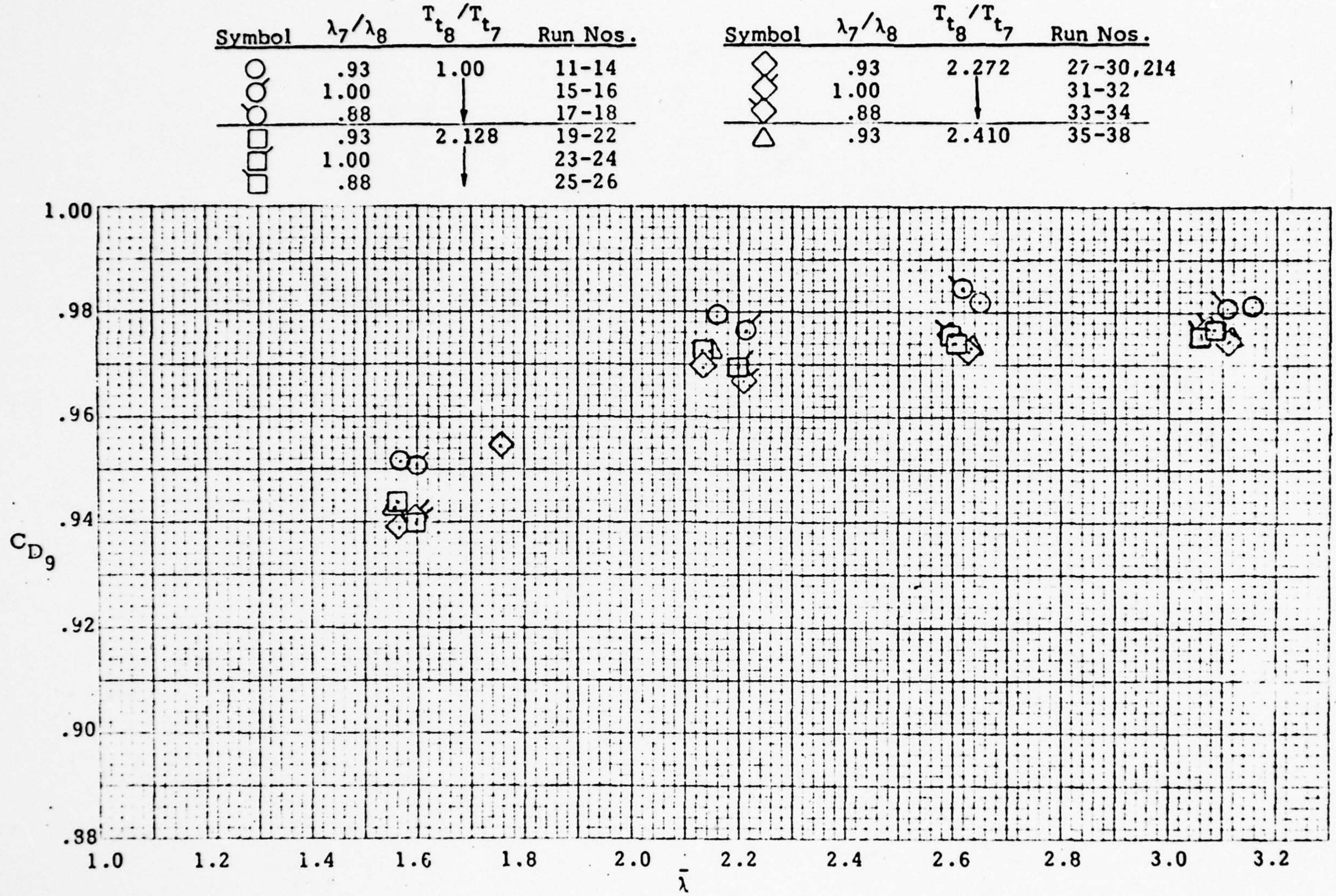


FIGURE 10a. NOZZLE DISCHARGE COEFFICIENTS, CONFIGURATION 2A

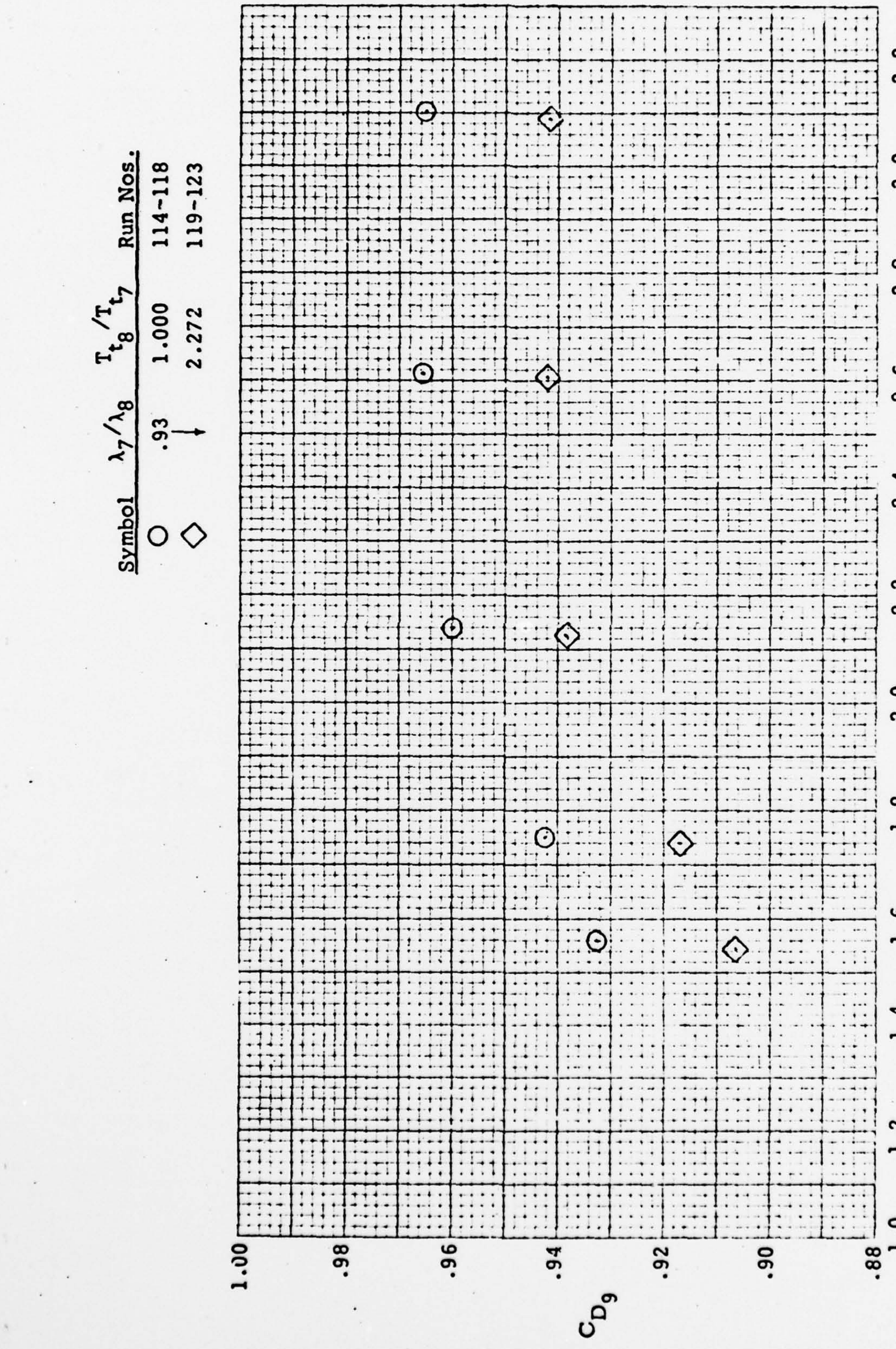


FIGURE 10b. NOZZLE DISCHARGE COEFFICIENTS, CONFIGURATION 5A

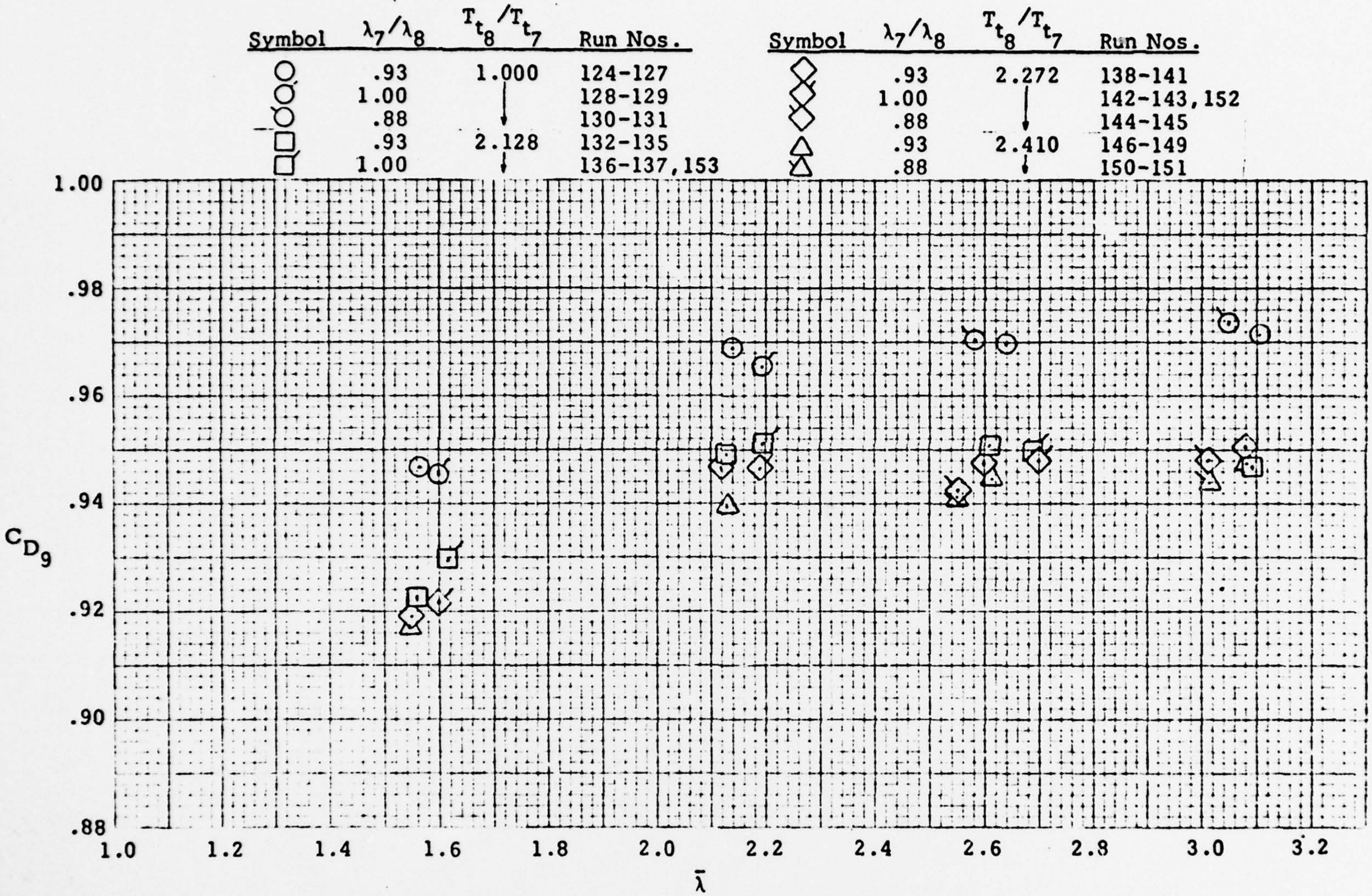


FIGURE 10c. NOZZLE DISCHARGE COEFFICIENTS, CONFIGURATION 4A